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THE

MISCELLANEOUS DOCUMENTS

OF THE

HOUSE OF REPRESENTATIVES

FOR THE

SECOND SESSION OF THE FIFTY-THIRD CONGRESS.

1893-'94.

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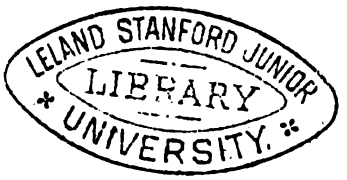

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Fifty-third Congress, Second Session.

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SPECIAL

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Volume X.

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WASHINGTON:
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1894.

SPECIAL CONSULAR REPORTS.

LEAD AND ZINC MINING

IN

FOREIGN COUNTRIES.

Vol. X.

ISSUED FROM THE BUREAU OF STATISTICS, DEPARTMENT OF STATE.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1894.

LEAD AND ZINC MINING CIRCULAR.

DEPARTMENT OF STATE,
Washington, August 14, 1890.

To the consular officers of the United States:

GENTLEMEN: At a recent meeting of the Lead and Zinc Mining Association of southwest Missouri and southeast Kansas a resolution was passed wherein the Department was requested to instruct its consular officers in Europe to report upon certain phases of lead and zinc mining in their respective districts, viz:

(1) The general depth of lead and zinc mining at present, as compared with mining in the past.

(2) Average per centum of metal in the ores.

(3) Average per centum of metal obtained by smelting process.

(4) The process or processes preferred in the smelting of the ores.

(5) Cost of the reduction of 2,000 pounds of ore into spelter.

(6) Value of the ore per ton of 2,000 pounds at the mines.

(7) Average value of spelter.

(8) Whether there is a surplus production of lead and zinc ores and spelters in your districts? If so, whither is it exported?

(9) Whether the production of ores is increasing or decreasing?

(10) Wages of miners.

As supplementary to the foregoing, the Department considers it necessary to add the following interrogatories:

(11) Are foreign lead and zinc consumed in your respective districts? If so, to what extent and in what form?

(12) Are American lead and zinc and their manufactures consumed in your respective districts? What is the best manner of introducing American lead and zinc, if not already introduced, and the best manner of enlarging the trade where already introduced?

You are requested to prepare reports upon the foregoing interrogatories and suggestions, and forward the same to the Department at your earliest convenience.

I am, gentlemen, your obedient servant,

WILLIAM F. WHARTON,
Acting Secretary.

CONTINENT OF EUROPE.

AUSTRIA-HUNGARY.

PRODUCTION OF LEAD AND LEAD ORES.

According to the annual report of the Austrian department of agriculture the production of lead ores in Austria amounted in the year 1889 to 12,835,700 kilograms, worth 8·86 florins* per 100 kilograms, so that the total value of the ores was 1,137,547 florins, produced by 8,527 miners. As compared with the year 1888, the production first referred to represents an increase of 2·43 per cent. In general, lead ores are obtained in the provinces of Bohemia, Moravia, Silesia, Styria, Carinthia, Tyrol, Carniola and Galicia, these ores being in most cases argentiferous galena, and in a less part ordinary galena.

In all cases the ores are extracted through shafts, the deepest at Pribram in Bohemia being 1,080 meters (1,151 feet), while the average depth of the shafts is from 300 to 400 meters. The production of lead ores in Bohemia, in the year 1889, at Pribram, amounted to 337,585,900 kilograms of crude argentiferous galena, extracted by 5,402 miners, and converted by dressing into 13,926,200 kilograms of fine ore, containing 35,600 kilograms of silver, and 4,429,100 kilograms of lead. The total value of these ores was 3,105,068 florins, corresponding to 22·30 florins per 100 kilograms.

These ores were smelted at Pribram, as will be hereafter explained.

At Joachimsthal, the production of argentiferous galena was 29,000 kilograms, worth 24,899 florins, 85·86 florins per 100 kilograms.

At Budweis, 1,400 kilograms of argentiferous galena were obtained, at a total value of 49 florins, which is 3·50 florins per 100 kilograms.

Ordinary galena was got at Joachimsthal to the amount of 1,100 kilograms, valued at 30 florins, or 2·73 florins per 100 kilograms.

At Brux, in a newly opened mine, there were obtained by 5 miners 1,200,000 kilograms of ore, worth 4,550 florins (38 kreuzers per 100 kilograms), which was exported to Saxony. At Mies 429 miners produced 1,645,700 kilograms, worth 146,164 florins (8·20 florins per 100 kilograms); of this latter quantity, 1,228,000 kilograms were exported to Germany, 220,000 kilograms were sold in the country, and 197,700 kilograms were smelted on the spot. In the province of Styria, 119

* In 1889 the silver florin was worth 38·6 cents.

miners got out 199,100 kilograms of argentiferous galena, worth 10,004 florins, or 5 florins per 100 kilograms. All these ores were smelted on the spot.

In the province of Carinthia 2,254 miners produced 8,501,500 kilograms of slick of argentiferous galena, worth 868,858 florins, or 10·22 florins per 100 kilograms. This slick was for the most part smelted on the spot. In the province of Tyrol 230 miners got out 802,800 kilograms of argentiferous galena, worth 75,226 florins (9·37 florins per 100 kilograms), which product was partly transported to Pribram in Bohemia, and to Littai in Carniola, for smelting, and partly sold to Aix la Chapelle in Germany.

The production of the province of Carniola was 459,600 kilograms of galena, extracted by 101 miners and worth 31,095 florins (6·77 florins per 100 kilograms). The province of Galicia only produced 22,800 kilograms of galena, worth 1,310 florins (5·74 florins per 100 kilograms), as several shafts had become drowned. The number of miners can not be stated exactly, as most of the ore was a by-product of zinc and iron mining; the 88 miners exclusively employed in mining lead ores extracted 3,400 kilograms.

According to the annual report of the Austrian department of agriculture 179 workmen were employed in the smelting of lead ores in Austria in the year 1889.

The production amounted to 8,217,800 kilograms of lead, worth 1,402,765 florins (17·70 florins per 100 kilograms), and 2,302,000 kilograms of litharge, worth 367,238 florins (16 florins per 100 kilograms).

Of this production there fell to Carinthia, 66·51 per cent; Bohemia, 21·96 per cent; Carniola, 11·01 per cent; Styria, 0·48 per cent; Galicia, 0·04 per cent.

As compared with 1888, the production of lead increased 2·8 per cent; that of litharge, 14·6 per cent.

In Carinthia 8,321,600 kilograms of slick, worth 822,642 florins, were smelted and yielded 5,466,100 kilograms of lead, worth 16·70 florins per 100 kilograms. Of this quantity of lead, 2,880,000 kilograms were produced in Carinthian reverberatory furnaces, 2,439,500 kilograms in five Rossie blast furnaces, and 146,600 kilograms in a Pölz furnace. The fuel used was valued at 54,609 florins and consisted of 20,584 cubic meters of wood, 4,914 cubic meters of charcoal, and 45,000 kilograms of coke. About eight parts by weight of slick (dressed ore) yield five parts by weight of metallic lead, and the reduction of these five parts of lead requires about 5 florins worth of fuel. The lead produced was, for the most part, worked in the country; a small quantity thereof was exported to Italy.

In the Government smelting works at Pribram, in Bohemia, 1,663,000 kilograms of lead, worth 18·50 florins per 100 kilograms, 2,296,600 kilograms of litharge, worth 16 florins per 100 kilograms, and 35,100 kilograms of silver, worth 89 florins per kilogram, were extracted by 488 workmen from 13,926,200 kilograms of ores.

Of this production 50,000 kilograms of lead and 1,275,600 kilograms of litharge were exported to Germany, Belgium, Italy, and Roumania.

At Mies, in Bohemia, 197,700 kilograms of ore were smelted, as already stated, and yielded 141,600 kilograms of metallic lead, worth 17·88 florins per 100 kilograms.

The fuel used for the reduction amounted to 50,000 kilograms of coke, 89,000 kilograms of pit coal, and 6 cubic meters of charcoal.

In the province of Carniola the smelting works at Littai employing 25 workmen, produced 905,200 kilograms of metallic lead, worth 148,675 florins, or 16 florins per 100 kilograms. For this production there were used 1,264,100 kilograms of unroasted ores, 648,800 kilograms of furnace remains, and 355,000 kilograms of intermediate products.

The necessary fuel amounted to 465 cubic meters of charcoal worth 1,423 florins, 2,296,300 kilograms of brown coal worth 10,012 florins, and 213,900 kilograms of coke worth 3,422 florins; consequently the total outlay for fuel was 14,857 florins. The lead produced was sold in the country; the ores came from Bohemia, Tyrol and Carinthia.

The production of the lead smelting works of the province of Styria amounted to 39,100 kilograms of metallic lead (worth 17·50 florins per 100 kilograms), 33 kilograms of silver (worth 89 florins per 1 kilogram), and 5,400 kilograms of litharge (worth 18·50 florins per 100 kilograms); 10 workmen were employed in the smelting works, and the quantity of ores and fuel consumed was as follows:

Description.	Quantity.	Value.
		Florins.
Ores.....kilograms..	125,700	6,282
Charcoal.....cubic meters..	126	.....
Wood.....do....	4	.....
Brown coal.....kilograms..	91,400	1,407
Coke.....do....	34,000	.....

The lead was sold in Austria.

The production of lead in the province of Galicia amounted to 2,900 kilograms (worth 13·80 florins per 100 kilograms), obtained as a by-product in zinc smelting works.

EXPORTATION OF LEAD ORES.

In the year 1888 there were exported to—

	Kilograms.
Southern Germany	555,500
Saxony	644,400
Prussia	625,600
Russia	13,000
Switzerland	67,300
Total	1,905,800

As each 100 kilograms was worth 9·20 florins, the total value of the exported lead ores was 175,331 florins. In 1889 the exportation of lead ores decreased to 976,500 kilograms.

IMPORTATION OF LEAD ORES.

In 1888 there were imported from—

	Kilograms.
Saxony	31,300
Prussia	57,500
Russia	4,400
Roumania	300
Servia	25,500
Total	119,000

As the value of the ores was 8 florins per 100 kilograms their total value was 9,520 florins.

In 1889, 154,000 kilograms of lead ores were imported, showing an increase of 35,000 kilograms.

EXPORTATION OF METALLIC LEAD.

Unwrought lead was exported in 1888 to—

	Kilograms.
Southern Germany	45,100
Saxony	134,900
Russia	300
Roumania	2,400
Servia	800
Italy	40,100
Through the port of Trieste	700
Total	224,300

The total exportation amounted to 39,138 florins.

In the year 1889 the exportation of unwrought lead rose to 288,600 kilograms. The exportation of lead in the form of sheets, plates, pipes, types, etc., amounted to the following in the year 1888:

	Kilograms.
Southern Germany	11,200
Saxony	17,500
Prussia	500
Russia	100
Roumania	15,300
Servia	46,200
Italy	94,700
Switzerland	5,800
Through the port of Trieste	63,500
Through the port of Fiume	900
Total	255,700

At the value of from 22 to 126 florins per 100 kilograms and at a total value of 88,286 florins.

In 1889 the exportation of such articles increased to 501,400 kilograms.

IMPORTATION OF LEAD.

Crude lead was imported in 1888 from—

	Kilograms.
Southern Germany	40,600
Saxony	447,500
Prussia	643,400
Russia	100
Servia	20,000
Italy	2,500
Switzerland	200
Through the port of Trieste	6,100
Through the port of Fiume	16,900
Total	1,177,300

Valued at 202,514 florins, or from 14.30 florins to 17.30 florins per 100 kilograms.

In 1889 the importation of crude lead increased to 2,978,400 kilograms.

Sheets, plates, pipes, wires, types, etc., of lead were imported in the following quantities in the year 1888:

	Kilograms.
From Southern Germany	37,100
From Saxony	35,800
From Prussia	14,300
From Servia	4,600
From Italy	3,300
From Switzerland	400
Through the port of Trieste	4,100
Through the port of Fiume	8,200
Total	107,800
Value ..... florins..	84,899

The importation of these articles in 1889 amounted to 127,800 kilograms, representing an increase of 20,000 kilograms.

EXPORTATION OF LEAD CHEMICALS.

In the year 1888 there were exported 1,357,800 kilograms of litharge, at a value of 285,138 florins, and 398,700 kilograms of white lead, worth 151,506 florins.

In 1889 the exportation was as follows:

	Kilograms.
Lead ashes	23,900
Litharge	1,321,400
White lead	352,300
Red lead	161,700
Sugar of lead	24,200
Sulphate of lead	44,400
Total	1,927,900

IMPORTATION OF LEAD CHEMICALS.

In the year 1888:

	Kilograms.
Litharge	83,200
White lead	113,200

In the year 1889:

	Kilograms.
Lead ashes	2,400
Litharge	153,000
White lead	108,900
Red lead	55,600
Yellow lead	15,900
Acetate of lead	5,100
Sugar of lead	50,300
Total	391,200

It thus appears that Austria-Hungary sells lead ores and afterwards buys the extracted metal for converting it into sheets, pipes, plates, etc., and chemicals, which it again exports.

PRODUCTION OF ZINC ORES.

Zinc ores are obtained in Austria in the provinces of Styria, Carinthia, Tyrol, Carniola, and Galicia. In the year 1889 the production of such ores (calamine and zinc blende) amounted, according to the report published by the Austrian department of agriculture, to 30,960,000 kilograms, representing an increase of 14.4 per cent as compared with the yield of 1888. These ores were extracted by 1,069 miners, and their value was 432,910 florins, or 1.44 florins per 100 kilograms. Of the above quantity of ores 24.6 per cent was produced in mines belonging to the Government.

The depth of the shafts varies from 300 to 400 meters. As to the distribution of the production in the aforesaid provinces, Styria produced 1,027,000 kilograms of ores, at the value of 32,864 florins (3.20 florins per 100 kilograms), and the whole quantity was exported to the Prussian provinces of Silesia and Rhenish Prussia.

Carinthia produced 5,963,600 kilograms of calamine, worth 140,699 florins, and 3,485,400 kilograms of zinc blende, worth 64,320 florins, or together, 9,449,000 kilograms of zinc ores, at a value of 205,019 florins (2.17 florins per 100 kilograms).

These ores, as well as those from Styria, were extracted by the miners mentioned in the chapter on lead. The Carinthian ores were sold to the zinc-smelting works of Cilli, in Styria; Trifail, in Carniola, and to works in Belgium.

Blende to the amount of 37,300 kilograms, valued at 4 florins per 100 kilograms, were pounded, washed, and sold as a gray color, and some of the calamine was sold to paint works.

In the province of Tyrol 165 miners extracted 2,727,200 kilograms of zinc blende, worth 93,356 florins (3.42 florins per 100 kilograms).

In the Government mine at Schneeberg the ores were separated by means of electro-magnetic apparatus, whereby their value was considerably increased. All Tyrolean zinc ores were shipped to Frankfort-on-the-Main and Aix-la-Chapelle. The province of Carniola produced 23,400 kilograms of zinc ores worth 383 florins (1.64 florins per 100 kilograms) and extracted by 6 miners.

In the province of Galicia 897 miners obtained 16,869,400 kilograms of calamine worth 101,288 florins (0.60 florins per 100 kilograms).

Of these ores 1,091,100 kilograms were sold to Germany, while the balance was smelted in this country.

PRODUCTION OF ZINC.

The total amount of zinc or spelter produced in Austria in the year 1889 amounted to 4,840,200 kilograms, valued at 1,101,028 florins. This quantity comprised 4,477,200 kilograms of spelter in ingots, worth 1,035,264 florins (23 florins per 100 kilograms). Of this production 35.8 per cent were extracted in Government smelting works.

The Government zinc smelting works at Cilli in Styria produced 1,500,300 kilograms of spelter (worth 23.56 florins per 100 kilograms), and 230,200 kilograms of zinc dust (worth 18.12 florins per 100 kilograms), the whole production having a value of 394,070 florins and employing 140 workmen.

The ores were brought from the mine at Raibl, in Carinthia, and the ore and fuel consumed were as follows: 1,752,400 kilograms of zinc blende, roasted, with a loss of weight of 20 per cent; 2,144,500 kilograms of calamine, calcinated, with a loss of weight of 30 per cent, worth 129,938 florins; 9,509,600 kilograms of brown coal; 1,414,100 kilograms of anthracite coal; 484,300 kilograms of coke, costing 60,835 florins.

The zinc-smelting works at Sagor, in the province of Carniola, produced with 85 workmen 1,228,300 kilograms of spelter, worth 294,000 florins (24 florins per 100 kilograms). For this production there were consumed 3,937,500 kilograms of ores, reduced to 2,323,500 kilograms by roasting; these ores comprised 2,877,700 kilograms of calamine from Raibl; 5,100 kilograms from Lichtenwald, worth 85,660 florins; and 942,000 kilograms of zinc blende. The ores were mixed with 13,200 kilograms of zinc ashes remaining from former operations and having a value of 2,391 florins, and with 10,000 kilograms of zinc ashes brought from the metal works at Berndorf, Lower Austria, worth 910 florins.

Of the spelter produced, there were sold in—

	Kilograms.
Carniola	8,700
Istria	84,300
Carinthia	4,100
Styria	52,300
Lower Austria	994,600
Bohemia	6,000
Germany	11,000
Italy	600,000

The fuel consumed consisted of 21,079,500 kilograms of coal dust, costing 39,852 florins.

The Galician zinc-smelting works employed 260 workmen and consumed:

Description.	Quantity.	Value.
	Kilograms.	*Florins.*
Home-produced ores	13,735,100	148,935
German ores	337,200	9,134
Coke and cinders	4,039,500	.....
Pit coal	38,733,200	.....

The production amounted to 1,748,600 kilograms of spelter worth 22.24 florins per 100 kilograms; 132,800 kilograms of zinc dust worth 18.11 florins per 100 kilograms; 2,053,500 kilograms of zinc white worth 23.22 florins per 100 kilograms; 2,900 kilograms of lead (by-product).

One million two hundred and forty-one thousand kilograms of the spelter produced were sold in the country; of the zinc dust 17,100 kilograms were sold in Austria, while 125,200 kilograms were exported to Germany and America.

Of zinc white, 1,518,100 kilograms were sold in Austria, and 1,591,500 kilograms were exported to Germany and Russia. One thousand and fifty kilograms of the lead produced were sold here.

IMPORTATION AND EXPORTATION OF ZINC ORES AND SPELTER.

According to the reports of the Statistical Central Commission the exportation of zinc ores amounted in the year 1888 to the following figures.

	Kilograms.
To southern Germany	3,176,000
To Saxony	21,000
To Prussia	1,376,200
To Switzerland	115,000
Through the port of Trieste	492,200
Total	5,180,400

At a value of 230 florins per 100 kilograms, or a total value of 119,149 florins. In 1889 the exportation of zinc ore fell to 4,236,200 kilograms.

In the year 1888 the importation of zinc ores, worth 2 florins per 100 kilograms amounted to —

	Kilograms.
From Saxony	100
From Prussia	109,300
Total	109,400

Worth 2,198 florins.

In the following year (1889) but 10,000 kilograms of zinc ores were imported.

Exportation of crude spelter from Austria-Hungary amounted in the year 1888 to 792,700 kilograms, worth from 18 florins to 21 florins per 100 kilograms, representing a total value of 154,890 florins.

	Kilograms.
To southern Germany	49,300
To Saxony	312,400
To Prussia	36,900
To Roumania	700
To Servia	300
To Italy	343,300
To Switzerland	6,700
By the ports of Trieste and Fiume	43,100
Total	792,700

In 1889 the exportation of crude spelter rose to 1,145,600 kilograms.

The importation of crude spelter into Austria-Hungary was in 1888 as follows:

	Kilograms.
From southern Germany	145,500
From Saxony	170,500
From Prussia	9,119,800
From Servia	4,400
From Roumania	2,500
Through the port of Trieste	400
Through the port of Fiume	1,600
Total	9,522,900

Worth from 16 florins to 19 florins per 100 kilograms and total 1,808,814 florins. In 1889 the importation of crude spelter into Austria-Hungary increased to 10,341,300 kilograms.

The exportation of manufactured spelter from Austria-Hungary (pipes, sheets, castings, etc.) in 1888 was as follows:

	Kilograms.
To Southern Germany	3,500
To Saxony	40,200
To Prussia	543,100
To Russia	1,400
To Roumania	4,900
To Servia	3,200
To Italy	11,500
To Switzerland	200
Through the port of Trieste	54,300
Through the port of Fiume	20,100
Total	682,400

At a value of 219,618 florins (32 florins to 50 florins per 100 kilograms).

In 1889 the exportation of spelter in the form of sheets, pipes, castings, etc., amounted to 706,400 kilograms.

The importation of manufactured spelter into Austria-Hungary (pipes, sheets, castings, etc.) in the year 1888 was as follows:

	Kilograms.
From Southern Germany	166,500
From Saxony	96,000
From Prussia	394,700
From Switzerland	600
Through the port of Trieste	20,800
Through the port of Fiume	45,200
Total	723,800

Worth from 30 to 50 florins per 100 kilograms, or in all 219,795 florins. In 1889 the importation decreased to 354,900 kilograms.

IMPORTS AND EXPORTS OF ZINC CHEMICALS.

The exportation of zinc chemicals from Austria-Hungary in the year 1888 was as follows:

	Kilograms.
Zinc vitrol	1,300
Zinc white	397,400
Zinc ashes	204,100

In the year 1889 the exportation of zinc white rose to 384,200 kilograms, worth 99,892 florins.

The importation of zinc chemicals into Austria-Hungary consisted in 1888 of—

	Kilograms.
Zinc vitriol	8,800
Zinc white	169,400
Zinc ashes	80,100

In 1889 the importation of zinc white fell to 149,200 kilograms, worth 50,728 florins.

The foregoing figures show that, as is also the case with lead, Austria exports zinc ores, imports crude spelter, and again exports manufactured spelter and zinc chemicals.

ANSWERS TO CIRCULAR.

(1) The average depth of mines at present is 900 feet. The former depth can not be ascertained.

(2) Average percentum of metal in the ores: Lead, 86 per cent; zinc, 55 per cent.

(3) Average percentum of metal obtained by smelting process: Lead, 75 per cent; zinc, 35 per cent.

(4) The zinc ores are as a rule treated after the Silesian method. The calamine is first calcinated in pit furnaces, wherein alternate layers of ore and fuel are found; the calcinated ore is crushed or ground between cylinders, or in a mill, or disintegrator. The zinc blende is first reduced to powder and afterward roasted in furnaces, wherein

it is gradually shoveled down over several stages, first converted into sulphate of zinc, and later on into oxide of zinc. The calcinated roasted ores are mixed with from 40 to 60 per cent of powdered uninflammable pit coal or powdered coke, and the mixture is filled into muffles or retorts which are in the number of from 20 to 40 inserted in a furnace. Each retort is provided with a clay condenser, and the furnace is in most cases heated with generating gas.

The process employed in Austria for smelting lead ores consists in first roasting the ore in reverberatory furnaces, whereby the sulphide of lead is transformed into sulphate of lead. The roasted ore is subsequently smelted with wood, charcoal, or pit coal in reverberatory furnaces or pit furnaces, these latter being used for treating argentiferous ores, in order to collect the metallic fumes which escape on the lead being burnt to litharge for separating the silver.

(5) The cost of reduction of 2,000 pounds of ore into spelter is $40; lead, $8.

(6) One ton (2,000 pounds) of spelter ore at the mines costs $8; lead, $34.

(7) The average value of metal per ton: Lead, $68; spelter, $76.

(8) There is a surplus production of lead and zinc ores and spelter in Austria.

It is exported to Germany, America, Belgium, Italy, Roumania, Russia, Switzerland, and Servia.

(9) The production of ores is increasing.

(10) Wages of miners:

	Florins per day.
Master miners	1.25 to 1.60
Miners	.80 1.03
Trackmen	.50 1.00
Laborers	.55 1.96
Women	.35 .55
Children	.40 .52

At the furnaces the wages are as follows:

	Florins per day.
Smelters	.65 to 1.50
Laborers	.61 .80
Women	.50 .60
Children	.51 .60

(11) Foreign lead and zinc are consumed in Austria, in the form of lead ores amounting in 1889 to 154,000 kilograms.

	Kilograms.
Metallic lead (crude)	2,978,400
Sheets, plates, pipes, wires, etc	127,800
Lead chemicals	391,200
Zinc ores	10,100
Crude spelter	10,341,300
Manufactured spelter	354,900
Zinc chemicals	238,100

(12) It is probable that American lead has been imported through the ports of Trieste and Fiume; however, this fact could not be ascertained.

The importation from the United States of metallic lead in an unwrought condition would be most advantageous.

The best manner of importing zinc from the United States would be in the form of crude spelter.

JULIUS GOLDSCHMIDT,
Consul-general.

VIENNA, *November 29, 1890.*

BELGIUM.

There are no lead or zinc mines in this consular district (Provinces of Brabant, Hainaut and Namur).

FOREIGN LEAD AND ZINC.

American lead or zinc is not consumed in the above-named provinces. Foreign lead and zinc are imported into Belgium principally for reexportation. Lead and zinc consumed in this district come from Liege, Belgium. Upon inquiry I find that if American lead, zinc, and their manufactures were properly introduced upon this market by competent agents, and offered at prices equal to, or cheaper than, the Belgian product, a large and profitable trade could be established.

IMPORTS AND EXPORTS OF LEAD AND ZINC.

The following tabulated statements show the amounts and quantities of lead and zinc imported into and exported from Belgium during the years 1887 and 1888:

Importation into Belgium.

Whence imported.	1887.			1888.	
	Metals.	Value.	Quantity.	Value.	Quantity.
		Francs.	*Kilograms.*	*Francs.*	*Kilograms.*
Brazil	Lead	134,000	362,844	5,000	14,185
France	Zinc	331,000	828,000	553,000	1,382,000
Germany	Lead	3,355,000	9,608,009	3,772,000	10,210,000
Do	Zinc	1,389,000	3,471,000	1,896,000	4,739,000
Greece	Lead	199,000	537,000	92,000	250,000
Holland	Zinc	2,580,000	6,449,000	3,117,000	7,793,000
Italy	Lead	466,000	1,259,000	432,000	1,167,000
Spain	....do	1,073,000	2,915,000	2,424,000	6,551,000
Total		9,532,000	25,429,844	12,291,000	32,106,185

Exportation from Belgium.

Whither exported.	1887.			1888.	
	Metals.	Value.	Quantity.	Value.	Quantity.
		Francs.	*Kilograms.*	*Francs.*	*Kilograms.*
Australia	Zinc	18,000	41,647	31,000	69,428
Austria	do	18,000	41,647	2,000	5,483
Argentine Republic	do	69,000	(*)	30,000	(*)
Brazil	do	120,000	267,000	86,000	193,995
Canada	do	272,000	609,000	343,000	777,154
Chile	do	46,000	101,276	88,000	195,725
China	Lead	13,000	35,925	88,000	195,725
Do	Zinc	384,000	871,423	274,000	600,992
Cuba and Puerto Rico	do	113,000	74,088	22,000	46,731
Denmark	do	76,000	168,035	100,000	222,607
Egypt	do	79,000	175,565	72,000	159,166
East India	Lead	2,000	5,200	72,000	159,166
Do	Zinc	87,000	199,075	129,000	286,845
England	Lead	257,000	695,000	1,153,000	3,118,000
Do	Zinc	4,995,000	11,197,000	6,326,000	13,992,000
France	Lead	3,541,000	9,570,000	3,745,000	10,122,000
Do	Zinc	11,874,000	26,438,000	9,429,000	20,995,000
Germany	Lead	1,919,000	5,197,000	2,012,000	5,438,000
Do	Zinc	297,000	664,000	838,000	1,864,000
Gibraltar and Malta	do	297,000	664,000	2,000	4,592
Greece	do	26,000	58,595	20,000	45,132
Holland	Lead	148,000	400,779	162,000	437,428
Do	Zinc	12,964,000	29,478,000	11,113,000	25,441,000
Italy	do	228,000	(*)	91,000	(*)
Japan	do	325,000	734,911	349,000	775,069
Luxemburg	do	2,000	5,499	5,000	11,139
Portugal	do	108,000	240,400	141,000	317,549
Russia	Lead	3,000	7,944	246,000	664,407
Do	Zinc	105,000	235,304	88,000	195,637
Sweden and Norway	do	317,000	706,532	183,000	408,171
Switzerland	do	495,000	1,100,000	429,000	952,941
Turkey	Lead	22,000	58,946	41,000	109,796
Do	Zinc	312,000	694,756	337,000	749,689
United States	Lead	3,000	7,961	68,000	169,267
Do	Zinc	476,000	1,100,000	533,000	1,291,000
Urugnay	do	20,000	44,070	67,000	149,590
Total		39,716,000	91,173,052	38,560,000	89,809,585

* Sundry weights.

GEO. W. ROOSEVELT,
Consul.

BRUSSELS, *September 17, 1890.*

LIEGE.

I am indebted to the kindness of Prof. J. Gillan, of the chair of mining in the University of Liege, for the following facts and figures, which may be relied upon as accurately giving the latest information upon the lead and zinc mining industry in Belgium:

(1) Belgium produces only small quantities of lead and zinc ores, and it is consequently of no interest to give the conditions of working the mines, which are of no importance.

The production in 1889 was only as follows: Lead ores, 194 tons, valued at 20,000 francs; zinc ores, 21,184 tons, valued at 1,296,000 francs, while in the same year (1889) Belgium consumed—Belgian lead ores, 197 tons, foreign lead ores, 14,014 tons, lesser productions, 8,432 tons,

total of 22,643 tons, which gave raw lead 9,412 tons, valued at 2,923,000 francs, silver, 54,168 English pounds, valued at 3,844,000 francs.

The zinc ores consumed in 1889 amounted to 209,870 tons, viz: Belgian zinc ores, 22,586 tons; foreign zinc ores, 187,284 tons.

The above figures show that Belgium does not count any more as producing lead and zinc ores, and that it is dependent upon foreign countries. The production of raw zinc was 82,586 tons, of a value of 38,401,000 francs.

The commercial movement of these two metals was in 1889 as follows:

Articles.	Production.	Importation.	Exportation.	Home consumption.
	Tons.	*Tons.*	*Tons.*	*Tons.*
Zinc	82,526	5,113	67,489	20,150
Lead	24,622	30,312	20,070	34,864

This shows that Belgium consumes only a fourth part of its zinc production and does not produce lead enough for its own consumption.

(2) The percentage of metal contained in the ore prepared for the furnaces is between 40 and 50 per cent.

(3) The metal obtained is according to the richness and purity of the ore. The loss of metal is 15 to 20 per cent, thus the ores give only 80 to 85 per cent of the metal they contain.

(4) In Belgium the Liege furnace is chiefly used; there are, however Silesian, furnaces. Heating by gas is every day more employed. The most remarkable progress in the manufacturing of these metals was in the use of crucibles made by machinery under strong hydraulic pressure.

(5) The cost of reduction of 2,000 English pounds of zinc ore varies very much with the price of coal. In general it may be estimated to be 60 francs.

(6) The value of the ore at the mines is the cost of mining; therefore it varies according to the conditions of each mine. But this is of no importance in Belgium on account of the small production.

The ores are imported principally from Spain and Italy.

(7) Zinc is subjected to great fluctuations in price. In 1885 it was about 300 francs per 2,000 pounds; to-day it is nearly 600 francs per 2,000 pounds.

(8) Belgium produces 82,000 tons of zinc, of which it consumes only 20,000 tons. The surplus is exported to all parts of the world, because the Vieille Montagne Zinc Co. at Liége has branch houses at all the principal parts of the globe.

(9) The production of ores is decreasing continually in Belgium and amounts only to an insignificant figure. But the Belgian companies have long since had the prudence to buy mines in foreign countries from whence they get most of their ores.

(10) After what has been said, it is without interest to mention the wages of the miners, who work under very different conditions, some finishing old underground mines, and others taking up old embankings formerly abandoned.

(12) It would be impossible for zinc to be introduced at a profit into this old and renowned home of the zinc industry. This is not so much the case with lead produced at a low cost, which is chiefly imported in pigs. Lately there were some heavy shipments of lead in pigs made from Liege to the United States.

JAMES R. DANFORTH,
Consul.

LIEGE, *December, 2, 1890.*

ANTWERP.

As there are no lead or zinc mines in this district, I am unable to obtain reliable answers to the inquiries.

There are extensive zinc mines and very important zinc works in the Liege consular district. Of these, the "Société Vieille Montagne" is one of if not the most important establishment of the kind upon the Continent. They have an office in this city, but more for the purpose of receiving and shipping their material than for any other purpose, and no details of the information desired could be obtained from the agent here.

There are no lead mines, but there are lead factories in the same district, the ore used by them coming principally from Spain. The product of both these lead and zinc factories is largely exported.

A society working under the name of "Usine de désargentabion," have a factory at Hoboken, in this district, for the purpose of extracting silver and antimony from the lead imported by them from various countries, principally from Spain, and after this process the soft lead is sold and exported, some of it going to the United States. The factory is located here partly on account of cheap labor, but principally because this is the most desirable and convenient location for the receipt and distribution of their supplies and products.

Large quantities of lead and zinc, both in the rough and worked state, pass through Antwerp in transit from the mines to the works, and again to manufacturers and consumers, but this is no market for either metal, and whatever may be consumed here is of domestic manufacture, against which the foreign article could scarcely compete.

JOHN H. STEWART,
Consul.

ANTWERP, *September 12, 1890.*

FRANCE.

ST. ETIENNE.

INTRODUCTORY REMARKS.

The zinc and lead mining industry of France is by no means so important as the corresponding industry in the United States.

There are two sections of the country only, the middle and the northwest, where lead and zinc mines are worked, and the two baser metals are always found in combination with silver. The annual production of lead in France is 22,000 tons, and of zinc not more than 8 tons are found. France exports about 7,000 tons of lead and imports 3,000 tons.

The zinc exports amounts to 15,000 tons, and the imports to 33,000, or several thousand tons more than the native production.

One of the two zinc and lead mining regions of France is situated in the consular district of St. Etienne, and I am able to give some precise information bearing on the cost method and profit of the industry.

LEAD MINES.

The average depth of the lead mines near Pontigibaud, in the department of the Puy de Dôrne, is from 600 to 750 feet. The country is of volcanic origin and very mountainous.

When the ore is taken from the mines it shows from 5 to 6 per cent of lead, which is increased by its washing process to 44 per cent. In addition to the lead a ton of this ore contains 2·9 pounds of silver.

The monthly output of these mines is 130 tons of lead and 600 pounds of silver. The metal is reduced by fusion, the cost of reduction being $17.35 a ton. The value of a ton of ore at the mines is from $60 to $65. The output of these mines increases a little from year to year and is all consumed in France.

The scale of wages is very low, the highest price paid to the workmen is 65 cents a day and the minimum 50 cents. By a day, a working period of eight hours is meant.

ZINC MINES.

The zinc mines near Ville Franche, in the department of the Aveyron, are conducted in much the same manner as those of which I have just written. The average depth of the zinc mines is 600 feet. In a ton of ore at the mines there is 4 per cent of zinc and 10½ pounds of silver. The cost of reducing a ton of ore is $17.35 and the value of the zinc contained in a ton of ore at the mines is $32.

The maximum wages of the miners in this section is 85 cents a day.

The output of the mines near Villefranche, like that of those in the other department, is increasing and some of it is exported to Sweden and Belgium.

The chief points from which lead and zinc are imported to this part of France are Sweden and Sardinia.

There is, without doubt, a fair field for the sale of American lead and zinc in France, but the development of the market here, in the first instance, would be attended with considerable expense and no little effort.

FRANCIS B. LOOMIS,
Commercial Agent.

ST. ETIENNE, *October 14, 1890.*

SOUTHERN FRANCE.

The existence of lead and zinc in southern France was known ages ago. These metals were mined from time to time, but at long periods apart and with no great results. Nearly all the old mines have been abandoned.

DEPTH OF MINES.

The principal lead and zinc mine now being worked in this consular district is the Bormettes, in the Department du Var. It was opened about five years ago, at a depth of 150 feet. At this depth begins a system of lateral galleries. A second system of galleries has been run at a depth of 300 feet, a third at 450 feet, and a fourth at 600 feet, the longest shafts being 600 feet in depth.

METAL IN ORES.

The average per centum of metal in the ores is, zinc, 50 per cent; lead, 6 to 8 per cent; silver, 1 per mil.

SMELTERS' EXPORTS.

The ores are not smelted at the mines, but are simply crushed, washed, and the lead and zinc separated by density. They are then, in this raw state, exported—the lead to Stolberg, Germany, and the zinc to Antwerp. About 20,000 tons of ore thus separated was exported last year. This exportation does not appear in the statistics given below for the port of Marseilles.

VALUE OF ORE.

The cost of the ore at the mines crushed, washed, and separated is 34 francs the 1,000 kilos.

The zinc ore delivered at the smelting works at Antwerp is sold for from 100 to 110 francs the 1,000 kilos (2,200 pounds), and yields about 50 per cent pure zinc. The lead ore delivered at Stolberg is sold for from 200 to 300 francs the 1,000 kilos, and when smelted gives about 60 per cent pure lead. The great difference between the cost of production at the mines and the price obtained for the ores respectively at the smelting works is accounted for in part by the freight and

charges, which amount for Antwerp to from 20 to 25 francs per 1,000 kilos, and for Stolberg, of course, to much more.

MINERS' WAGES.

There are 400 miners at the Bormettes, who receive from 70 to 80 cents per day. A number of women employed in separating the ores, but who do not go down into the mines, receive 30 cents per day.

There are several other mines in the Var just commenced to be worked. All the ore is exported to Belgium, England, and Germany. All this production, which is constantly increasing, is exported.

FOREIGN LEAD AND ZINC.

The statistics for the port of Marseilles give the following for lead for the years 1886, 1887, 1888, and 1889.

Lead imports at Marseilles.

Countries whence imported.	1886.	1887.	1888.	1889.
	Tons.	*Tons.*	*Tons.*	*Tons.*
Spain	13,726	15,335	16,547	24,132
England	50	.....	.....	232
Italy	1,282	21	155	6
Algeria	52	24	11	½
Turkey	.....	233	2	1
Australia	.....	145	65	.....
New Caledonia	.....	151	.....	.....
All other countries	40	2,505	148	35
Total	15,150	18,414	16,928	24,406½

Lead exports from Marseilles.

Countries to which exported.	1886.	1887.	1888.	1889.
	Tons.	*Tons.*	*Tons.*	*Tons.*
Italy	840	1,608	2,380	2,870
Russia	666	531	2,044	2,133
Turkey	199	157	348	278
Algeria	61	146	168	868
Austria	8	8	11	33
Egypt	1	28	67	24
Africa	20	4	34	15
India	8	164	180	626
Greece	35	54	74	37
Barbary States	82	36	3	.....
United States	500	.....	.....	.....
All other countries	315	32	1,232	3,292
Total	2,730	2,768	6,541	9,719

The tables show that of 24,406½ tons lead imported in 1889, 24,132 tons came from Spain. Of this, 21,500 tons was smelted in Spain (plombs en masses et en saumons). A part of this importation was converted into sheeting, shot, and pipe, and a part of the 9,719 tons exported was in those forms.

CHARLES B. TRAIL,
Consul.

MARSEILLES, *September 20, 1890.*

BORDEAUX.

There are no lead or zinc mines in this consular district, or if they do exist they are not operated at present. I have been informed that there are no manufactories of lead or zinc articles in this vicinity, and I can not learn of any importation of lead or zinc, or the articles manufactured therefrom, into this consular district from the United States.

HORACE G. KNOWLES,
Consul.

BORDEAUX, *December 9, 1890.*

COGNAC.

There are no mines of lead or zinc worth mentioning in this consular district. There is one old lead mine at Allone, not working, as it did not pay.

American manufactures of lead and zinc to be introduced here would have to come through agents in Paris or Bordeaux and be sold low enough to compete with manufactures in France.

WM. S. PRESTON,
Consul.

COGNAC, *December 11, 1889.*

LIMOGES.

The few mines that there are in this consular district are owned mostly by close corporations, who put every barrier in the way to prevent any accurate information being obtained of their methods of work or amount of business done.

(1) The only mine in this consular district is situated in the Department de Corréze, at Ussel. The zinc mines are few and do not yield abundantly. The metal is not found in its native state. The working of the mine has temporarily ceased.

(2) Average percentum of metal in the ores, from 20 to 15 per cent.

(3) Average percentum of metal obtained by smelting process; loss about 3 or 4 per cent.

(4) The process or processes preferred in smelting of the ores is the roasting or reaction; some mines use the English and Belgian processes.

(5) It is impossible to obtain the cost of the reduction of 2,000 pounds of ore into spelter.

(6) Value of the ore per ton of 2,000 pounds at the mines. Lead at the mines is worth 125 and 130 francs per ton.

(7) Average value of spelter. No satisfactory reply obtained.

(8) There is no surplus; the supply does not equal the demand.

(9) The production is stationary, or perhaps decreasing.

(10) Wages of miners. The average wages paid per diem is 3.50 francs.

(11) In the center of France no industry uses either lead or zinc, except in the earthenware factories and that is decreasing each year.

(12) It is difficult to tell whether American lead and zinc are consumed in this district or not; there are no direct importations. The best way to introduce these metals would probably be to have an American open a place in Paris where these metals, as well as manufactured articles, could be seen, and if properly shown, the prices being advantageous to the buyer, there can be no doubt but that a good market would be found for American lead and zinc.

WALTER T. GRIFFIN,
Commercial Agent.

LIMOGES, *December 20, 1890.*

LYONS.

The general depth of lead and zinc mines at present is one-fourth to to one-fifth greater than formerly.

The per cent of metal in the ores is said to be from 60 to 70. This is the amount obtained by smelting.

The processes preferred in the smelting are either in crucibles or by open-fire furnaces.

The cost of reducing 2,000 pounds of ore into spelter ranges from 8 to 10 francs.

There is a large amount of lead shipped here from Belgium and from Spain. Very little is produced in France. No zinc is produced here, although there is considerable demand for it.

The production of ore is decreasing.

Miners receive from 4 to 8 francs a day.

A large amount of lead and zinc are imported into this district in the form of refined spelters.

American lead and zinc have not been introduced into this district. Probably the best method of introducing them would be through trustworthy agents who know the French people and understand their language.

EDW. B. FAIRFIELD,
Consul.

LYONS, *December 3, 1890.*

NICE.

No lead or zinc is mined in my district, nor can I find trace of any used that is manufactured in the United States. The largest amount used is French, but for fine sewer, or drain work, English is preferred, in pipe, as more truly drawn, the French being often irregular. Considerable paint is imported from England. I can find nothing from the United States for sale at Nice but a few household articles made by the Enterprise Manufacturing Company, of Philadelphia, and brought here from Paris. Active agents are the best means of introducing our wares into this country. Last summer I induced a young man who does work for me to send to firms advertising in journals sent free to the consulate for catalogues and samples with which he is trying to open up trade outside of his other work.

WM. HARRISON BRADLEY,
Consul.

NICE, *January 10, 1891.*

GERMANY.

Herewith you will find, marked No. 1, a statement showing the production of the lead and zinc mines of Breslau, Klausthal, Dortmund, and Bonn during the years 1883 and 1886.

It will be seen that the production of zinc was greater in 1886 than in 1883, and that the production of lead was greater in 1883 than in 1886.

The statistical statement herewith marked No. 2 shows the extent and form of the import and export trade of the German Empire in lead during the nine months ended September 30, 1890, as compared with the corresponding period of the previous year.

The statistical statement herewith marked No. 3 shows the extent and form of the import and export trade of the German Empire in zinc during the nine months ended September 30, 1890, as compared with the corresponding period of the previous year. It will be seen that American lead and zinc and their manufactures are not consumed to any great extent in Germany.

Belgium supplies two-thirds of the lead imported by Germany and more than half of the zinc.

Germany, it will be observed, imports lead in different forms, principally from Belgium, Great Britain, Austria-Hungary, Netherlands, and Spain.

Germany exports lead in different forms, principally to Belgium, France, Great Britain, Netherlands, Austria-Hungary, Russia, and Switzerland.

Germany, it will be seen, imports zinc in different forms, principally from Belgium, Great Britain, Netherlands, and Austria-Hungary.

Germany exports zinc, principally to Belgium, Denmark, Great Britain, Italy, Netherlands, Norway, Austria-Hungary, Russia, Sweden, Switzerland, and to the United States.

As the exports from Germany in both lead and zinc and their manufactures are far in excess of the imports, it seems to me that this is not a specially fruitful field for the enlargement of our trade in lead and zinc.

It has occurred to me that the best fields for American lead and zinc and their manufactures is where Germany finds it profitable to dispose of her exports.

1. Production of German lead and zinc mines in 1883 and 1886.

Description.	Works without production.	Works with production— As principal product.	Works with production— As secondary product.	Total production.	Production of the year able for sale. Quantity.	Worth in marks. Total.	Worth in marks. Per ton.	Average of miners daily descended in 1883 and 1886. By night.	By day.	Total.
Zinc ore.				*Tons.*	*Tons.*					
Breslau	2	33	12	578, 858	578, 858	3, 547, 663	6. 13	5, 006	4, 016	9, 022
Klausthal	.....	.....	2	5, 573	5, 573	389, 381	69. 87	(*)	(*)	.....
Dortmund	.....	3	2	34, 237	34, 237	803, 550	23. 47	638	393	1, 031
Bonn	7	21	30	85, 548	85, 548	2, 963, 726	34. 64	2, 304	1, 284	3, 588
Total in 1886	9	57	46	704, 216	704, 216	7, 704, 260	10. 74	7, 948	5, 693	13, 641
Total in 1883	9	62	49	676, 796	676, 796	8, 858, 477	13. 09	7, 600	5, 874	10, 475
Lead ore.										
Breslau	.....	5	16	29, 316	29, 316	3, 647, 941	124. 44	551	335	886
Klausthal	.....	4	2	33, 169	33, 169	3, 150, 476	94. 98	2, 302	1, 258	3, 560
Dortmund	.....	.....	3	1, 039	1, 039	92, 872	89. 39	73	38	111
Bonn	45	37	31	76, 641	74, 988	8, 205, 608	109. 50	4, 762	4, 253	9, 015
Total in 1886	45	46	52	140, 165	138, 462	15, 096, 897	109. 03	7, 688	5, 884	13, 572
Total in 1883	57	58	54	149, 446	148, 072	16, 862, 442	113. 88	9, 405	7, 460	16, 865

* Under lead ore.

2 and 3. Statement showing the imports and exports of lead and zinc into and from Germany during the nine months ended September 30, 1890.

IMPORTS.

Whence imported.	Lead, raw.	Litharge.	Zinc.
	1,000 kilos.	*1,000 kilos.*	*1,000 kilos.*
Free ports*	519	342	167
Belgium	64, 395	6	34, 467
Denmark	862	11	705
France	1, 861	50	303
Great Britain	17, 622	759	12, 260
Italy	702	.....	7
Netherlands	2, 979	203	7, 032
Norway	37	.....	357
Austria-Hungary	403	4, 572	4, 709
Russia	501	.....	.....
Sweden	14	.....	222
Switzerland	472	.....	409
Spain	6, 025	90	377
Argentine Republic	44	.....	.....
Brazil	20	.....	.....
United States	13	.....	.....
All other	650	.....	.....
Total	97, 119	6, 034	61, 015
Total for preceding year	61, 950	17, 600	64, 230

* Hamburg, Bremerhaven, Geestemunde, etc.

2 and 3. Statement showing the imports and exports of lead and zinc into and from Germany during the nine months ended September 30, 1890.—Continued.

EXPORTS.

Whither exported.	Lead, raw.	Litharge.	Zinc.
	1,000 kilos.	*1,000 kilos.*	*1,000 kilos.*
German free-ports	572	1,046	14,552
Belgium	33,488	6	92,171
Denmark	324	7	8,000
France	30,864	510	38,553
Great Britain	76,116	914	190,819
Italy	20	96	20,176
Netherlands	19,216	284	50,109
Norway	6	13	3,571
Austria-Hungary	26,039	1,202	101,804
Roumania	58	853	1,742
Russia	33,176	9,323	36,078
Sweden	160	44	7,914
Switzerland	6,835	2,039	3,002
Spain	14	46	497
British India	.....	.....	2,670
Argentine Republic	101	.....	143
Brazil	163	5	521
United States	517	8	9,106
All other	4,282	58	31,716
Total	230,950	16,454	608,135
Total for preceding year	241,085	17,610	531,981

W. H. EDWARDS,
Consul-General.

BERLIN, *December, 8, 1890.*

PRODUCTION OF LEAD ORES.

Although the production of lead and zinc ores in this consular district is small as compared with that of other parts of Prussia, I am, nevertheless, enabled to furnish some information on these important industries which may not fail to be without interest. It may be stated in the beginning that the state of Prussia produces about all the lead and zinc ores of Germany.

Of lead ores the following are the estimated quantities of production, in tons, in the year 1889, together with values:

Provinces.	Production.	Value.	Value per ton.
	*Tons.**	*Dollars.*	*Dollars.*
Silesia	32,115	870,934	27.12
Hanover	45,888	701,531	15.28
Westphalia	10,148	330,743	32.60
Hesse-Nassau	12,589	347,827	27.60
Rhineland:			
District of Coblentz	4,906	250,385	50.93
District of Cologne	7,273	210,140	28.79
District of Aix la Chapelle	45,631	1,200,098	26.41
District of Dusseldorf and Treves	1,292	20,422	15.70
Total production in Prussia	159,845	3,932,028	24.50
All other states of Germany	7,597	196,118	25.70
Total production in Germany	167,443	4,138,146	24.72

*1,000 kilos to the ton.

VALUE OF ORES.

The value of the ores per ton, as will be seen from the above table, varies in the different districts, and depends upon the percentage of lead in the ores. For instance, the highest average value per ton ($50.93) in 1889 was in the district of Coblentz, while the lowest ($15.70) was in the districts of Dusseldorf—Treves.

METAL IN ORE.

I am informed that the average amount of metal in the ores varies from 20 to 80 per cent, and the average obtained from the metal in the ores by the smelting process is generally from 90 to 92 per cent. The ore occurs in this district as the sulphide of lead, or galena, and contains also silver in varying quantities. The ore mined by one of the largest companies in this neighborhood, whose production of the metal in 1889, according to the Cologne chamber of commerce report, amounted to 25,200 tons, is mixed largely with sand, and contains only 2·31 per cent lead, but by a washing process this sand and other impurities are removed, so that the ore thus prepared contains about 50 per cent lead. The ore mined by a second company contains 55½ per cent lead and 48 per cent gray silver. This company produces monthly 700 tons blende and 200 tons lead ore. The blende contains, on an average, 52 per cent zinc and 1½ per cent lead.

SMELTING PROCESS.

The smelting process of the lead ores is conducted in a blast furnace—that is, after the preliminary roasting of the ores in a reverberatory furnace.

Zinc ore occurs in this district as blende. The ore mined by two of the largest companies contains, on an average, 52 per cent zinc.

The process of smelting the ores is as follows: The ores are first roasted in a reverberatory furnace, by which the sulphur is eliminated and the zinc oxidized. The oxide of zinc is afterwards mixed with coal and heated in earthenware muffles up to 1,500° Celsius, at which temperature the oxide of zinc is reduced and volatilizes, and is finally condensed in small vessels outside the furnace and connected with the muffles. In other words, the distillation of the zinc in muffles.

STATUS OF PRODUCTION.

The following figures give the production and value of lead ores in Germany from 1880 to 1889, inclusive:

Years.	Quantity.	Value.
	Tons.	
1880	159,725	$4,550,901
1881	164,770	4,579,189
1882	177,655	4,907,783
1883	169,753	4,305,623
1884	162,772	3,746,037
1885	157,869	3,502,184
1886	158,505	3,788,623
1887	157,570	3,789,731
1888	161,777	3,976,697
1889	169,569	4,219,819

The above figures show that there has not been any appreciable increase or decrease in the production of lead ores in Germany during the last decade. But the statistics show that there were considerably more ores consumed in Germany in 1889, and also in years previously, in the manufacture of pig lead, than were produced. In 1889 there were 258,902 tons of ores and slag consumed in the manufacture of lead, while there were, as is seen from the above table, only 169,569 tons produced, thus leaving an excess of 89,333 tons consumed above the production, a great part of which is said to have been imported from Portugal and Spain.

AMERICAN LEAD AND ZINC.

On inquiry of the leading dealers in Cologne, I am informed that neither lead nor zinc is imported into this consular district from the United States, and they gave as their reason that neither of these metals could compete in price here with the German manufacture. Neither do the official statistics show that any lead is imported from America.

IMPORTS AND EXPORTS OF LEAD.

It will be seen from the following table that Germany has exported annually considerably more lead than has been imported:

Pig lead.

Years.	Production.	Import.	Export.	Consumed.
	Tons.	*Tons.*	*Tons.*	*Tons.*
1876	71,477	3,299	32,779	41,997
1877	76,656	3,005	32,468	47,193
1878	79,482	2,987	47,308	35,161
1879	82,362	4,019	43,360	43,021
1880	85,928	2,615	45,419	43,124
1881	86,728	2,658	46,799	42,588
1882	92,550	1,973	41,916	52,607
1883	90,732	3,165	49,574	44,323
1884	94,809	1,482	49,313	46,978
1885	93,134	1,489	41,123	53,500
1886	92,520	2,037	37,777	55,786
1887	94,894	7,619	39,108	63,405
1888	96,964	7,358	34,890	69,432

Imports and exports of pig lead by countries.

	1889.		1888.		1887.	
	Import.	Export.	Import.	Export.	Import.	Export.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Bremen and Hamburg	222	640	506	3,998	89	2,011
Belgium	6,465	4,342	2,964	3,589	3,288	3,866
France	1½	4,985	7	5,874	21	5,749
Great Britain	1,640	8,034	256	7,419	544	10,478
Holland	375	3,387	256	3,214	279	3,163
Austria-Hungary	210	2,915	201	1,147	289	2,909
Russia	22	5,090	61	8,191	113	8,616
United States	½	2	.....	.....	.....	81
All other countries	681	3,311	3,105	1,425	2,544	2,234

Although the above figures show that scarcely any lead was exported to the United States during the years mentioned, there was a recent shipment of some 300 tons made from this district, which had been done, I was informed, to take advantage of the comparatively high price of lead in the United States. Of the manufactures of lead exported from this district to the United States, that of mennige (red lead) forms an important part. The value of the export during the year just ended amounted to $84,000.

PRICE OF LEAD.

The following shows the average price of lead per 100 kilos in German marks during the months given in 1890:

City.	January.	February.	April.	July.	August.	September.	October.
	Marks.	*Marks.*	*Marks.*	*Marks.*	*Marks.*	*Marks.*	*Marks.*
Cologne	29·90	27·25	26·70	26·85	27·00	27·94	29·15
Berlin	29·00	27·50	27·50	27·00	27·75	30·00	29·75
Frankfort	27·50	26·75	26·00	26·50	26·75	27·50	28·50
Halberstadt	26·50	25·30	25·25	25·30	25·40	26·90	28·20
Hamburg	29·80	29·50	28·50	28·50	28·75	29·50	30·25

ZINC ORE PRODUCTION.

Of zinc ores the following are the estimated productions, in tons and values, during the year 1889, according to provinces:

Province.	Production.	Total value.	Value per ton.
	Tons.		
Silesia	582,149	$2,929,484	$5.03
Hanover	6,925	195,213	28.18
Westphalia	38,314	282,374	7.37
Hesse-Nassau	15,598	214,175	13.73
Rhineland:			
Coblentz	3,283	38,082	11.60
Cologne	29,069	283,135	9.73
Aix-la-Chapelle	20,566	193,978	9.43
Dusseldorf	11,630	75,789	6.51
Total	707,534	4,212,400	5.93

It will be seen from the above figures that the value of the zinc ores varies in the different districts, the highest average being in the province of Hanover, namely, $28.18 per ton, and the lowest in the province of Silesia, namely, $5.03 per ton, where nearly two-thirds of the total production of Prussia is produced.

IMPORTS OF ZINC BLENDE.

Zinc blende is imported from Pothes, near Santander, in Spain, and calamine ores from Almeria and Cartagena, in the southern part of Spain.

PRODUCTION AND VALUE OF ZINC ORES.

The following gives the productions and values of zinc ores in Germany during the years 1880 to 1889:

Year.	Production.	Value.	Year.	Production.	Value.
	Tons.			*Tons.*	
1880	632,895	$3,839,430	1885	680,654	$1,820,062
1881	659,530	2,283,469	1886	705,176	1,183,980
1882	694,711	2,835,073	1887	900,712	2,380,499
1883	677,794	2,115,920	1888	667,760	3,271,788
1884	632,040	1,861,011	1889	707,534	4,211,400

Although the production in 1889 was 200,000 tons less than in 1887, the value of the ores in 1889 was almost twice as great.

IMPORTS AND EXPORTS OF ZINC.

There is considerably more zinc than lead exported from Germany, and the imports of the former is a mere trifle as compared with the exports, as will be seen from the following during the years 1876 to 1888:

Year.	Production.	Import.	Export.	Consumed.
	Tons.	*Tons.*	*Tons.*	*Tons.*
1876	83,227	5,900	42,745	46,382
1877	94,996	4,825	49,830	49,991
1878	94,954	3,780	44,441	54,293
1879	96,757	3,760	54,919	45,598
1880	99,646	3,990	40,622	63,014
1881	105,478	4,238	59,963	49,753
1882	113,418	4,395	56,478	61,335
1883	116,854	4,474	54,939	66,389
1884	125,276	4,519	56,995	72,800
1885	129,098	4,000	68,432	64,666
1886	130,854	4,584	65,372	70,066
1887	130,494	4,585	65,258	69,821
1888	133,224	6,063	59,114	80,821

It is seen that during the above thirteen years about one-half of the total production of the zinc in Germany has been exported.

The following shows the imports and exports into and out of the German Customs Union, by countries, during the year 1889:

Country.	Imports.	Exports.
	Tons.	*Tons.*
Belgium	4,233	1,044
France	2	2,807
Great Britain	1,092	29,733
Italy		1,177
Holland	1,740	5,292
Austria-Hungary	400	12,768
Russia	3	2,576
Sweden	27	572
United States	2	947

The exports are chiefly to Great Britain and Austria-Hungary. There were only 2 tons imported from the United States against 947 tons exported there. Of the manufactures of zinc, zinc white was exported to the extent of 6,883 tons in 1889 against 2,635 tons imported with scarcely any having been imported from the United States.*

There has been a considerable rise in the price of zinc in Germany since the year 1886, the averages in that year being about 28 marks per 100 kilos against an average of about 50 marks at the present time.

WAGES.

The following are the wages paid to the different classes of workmen by one of the largest lead and zinc mining works in this district per eight hours shift. First-class miners, 2.80 marks, or 66.64 cents; average miners, 2.40 marks, or 57.12 cents; young miners, 2 marks, or 47.6 cents; beginners, 1.60 marks, or 38.08 cents. The average paid to hands above the pit of ten-hour shift is according to age, and is from six-tenths mark, or 14.28 cents, to 2.20 marks, or 52.36 cents. In a second large mine in this district the average wages paid to miners is 2.50 marks, or 59½ cents, and 1.85 marks, or 44 cents, to haulers. Hands employed above the mines average about 1.50 marks, or 35.70 cents, per day. According to official statistics, of 30,252 workmen employed in the ore mines in the right Rhenish districts, the average wages earned per workman during the first quarter of the year 1890 was 2.50 marks, or 59½ cents, per shift.

WM. D. WAMER,
Consul.

COLOGNE, *January 17, 1891.*

*The value of the export of zinc oxide from this consular district to the United States during the year 1890 was nearly $50,000.

ANNABERG.

Neither lead nor zinc ores have ever been discovered in the Erzgebirge, within which range of mountains this district wholly lies, and, so far as I can learn, neither American lead nor zinc, nor any other American goods, except, perhaps, a few bottles of adulterated whisky, are ever offered for sale in this consular district. This is rather astonishing, considered in connection with the fact that during the last decade of years the United States has purchased of the manufacturers of this district more than 70,000,000 German marks' worth of manufactured goods. The Annaberg consular district is a beehive of industry, and consequently famous for its prosperity, but if left to depend upon agriculture alone it would become a melancholy failure.

DANIEL B. HUBBARD,
Consul.

ANNABERG, *December 16, 1890.*

BARMEN.

DEPTH OF MINES.

At Letmathe the present depth of the mines in the vicinity of Iserlohn, which are owned by the "Markischen Hüttenverein" at Letmathe, are from 130 to 180 feet, and it is very difficult to ascertain the depth of those in the past inasmuch as no statistics on that subject are obtainable; and further, because the ore is raised like coal, from deep shafts. There are very few drift entries or galleries.

METAL IN ORES.

At Letmathe the average metal percentage depends altogether on the process employed in getting the metal; but the highest is 40 per cent.

METAL OBTAINED BY SMELTING.

At Letmathe the highest percentage of metal obtained is 25 to 30; the "Schlessiger Ores," however, which are also smelted by the "Märkischen Hüttenverein" yield 36 per cent.

PROCESS OF SMELTING.

The process or processes preferred in the smelting of the ores would not be given. My deputy states in writing:

Though I did all in my power, both at Letmathe and at New Orgede, to obtain an answer to this question, I found it impossible to get it; and on raising the question, the remark, accompanied by distrust and impoliteness, was made to me that it was a very unfair demand on my part to ask such a question, to try to draw the very soul out of a manufacturing secret, and they gave me to understand that such an inquiry could only be based on espionage. I did not receive the least information

about this question. I was further informed that each and every employé in the works was in duty bound to observe about this the strictest silence, and that in the event of the fabrication secret being betrayed by one of their employés, he was not only liable to expect severe punishment from the factory, but would also, since most of the mines joined the "Berlin convention," fail to find employment in any other establishment.

In like manner and meaning I was answered questions Nos. 5 and 6.

VALUE OF ZINC SPELTER.

To the seventh question, "Average value of spelter." Answer (ascertained at Schwelm): The average value of zinc spelter depends at the present time simply on stock exchange maneuvers. Just now the price per ton of 1,000 kilos is £25; now and then it is quoted at £25.5, and has been as high as £25.15. Lately even higher quotations have been reached. In the course of the past year the price of zinc reached £25 10*s*. This sudden rise was attributable to the "Berlin convention" which had been called into life. This "convention" (evidently another name for a "trust concern"), it should be remembered, established a firm, fixed price per ton, up to which, it is evident, it is permitted to quote, but not below. A "conventional" fine of 1,000 marks has been established against mines quoting at a lower figure. I can not, of course, take it upon myself to vouch for the strict correctness of these statements, but I have them from sources I deem reliable.

IMPORTS AND EXPORTS OF ORE.

The consequence of the said "convention" being to keep the prices constantly at a certain height, the thought of overproduction is therefore absolutely out of question; in other words, the degree of production is controlled by the "Berlin convention."

As far as I have been able to ascertain, no lead is mined within this consular district.

The principal markets of zinc are in the first line, Belgium and Russia; less goes to France and England, but there in a manufactured state prepared for certain purposes.

STATUS OF PRODUCTION.

This was in reality answered under question No. 8, viz: That since the said "Berlin convention" has been called into life overproduction or insufficient production can not be thought of, since only so much is produced as is actually necessary. This, however, must lead one to the opinion that the zinc mines of Germany are able to more than supply the demands made upon them.

WAGES OF MINERS.

The Märkischen Hüttenverein disliked to answer this question, but by the permission of the head of the firm of Ernest Dohl & Co. the answer was given as follows: That the country round about

Letmathe and Iserlohn was very productive and abounding in articles of food, and living cheap. The wages of miners in consequence amounted to 3.50 to 4.50 marks ($0.83 to $1.07) per diem (it is about the same in the collieries in this district—i. e., western Westphalia), that this rate of wages for the Iserlohn district was to be considered high, and was paid in view of the dangers attending mining in rock blasting and the unwholesomeness of the atmosphere in the pits of the mines. Finally, it was also admitted that the said wages were paid only to miners laboring under contract.

FOREIGN LEAD AND ZINC.

As far as I have been able to ascertain, Spanish lead is consumed, but not very extensively; it comes into the market in ingots or blocks. To what extent foreign lead is consumed in this consular district it would be utterly impossible to ascertain. The district is large and contains several cities: Barmen, Elberfeld, Remscheid, Solingen, Dortmund, Bochum, Hager, Bielefeld, Iserlohn, with an average population of about 60,000 inhabitants, and many large towns all manufacturing more or less. It is evident that much lead is consumed both in manufactures and in plumbers' work, all the cities and all large towns being provided with water conduits into the houses and factories. Much zinc is also used in manufacture, be it as an alloy to metals (in blocks) or in a prepared manufactured state for various purposes. How much foreign lead is imported into Germany and zinc (if any) the German imperial custom statistics, I presume, alone can disclose, but how much of it goes to this consular district I can not possibly ascertain.

AMERICAN LEAD AND ZINC.

I can not find out whether American lead is consumed in this district. As to zinc, I received information I deem the most reliable at Schwelm, viz: Up to the present time no American zinc has been consumed. Many consumers no doubt would be glad if they could only learn the sources whence to obtain American zinc. The "Berlin convention," existing about a year, has raised the price of zinc to such a high figure that such of the industries in and around Barmen and Lüdenscheid as consume this metal feel a corresponding drag in their business to an extent that was not felt for years. This drag is attributed solely to the high price of zinc, inasmuch as other countries with cheaper zinc could easily and steadily compete with Germany.

Consequently, if American zinc can be imported into Germany at a lower price than that prescribed by the Berlin convention and can subsequently compete with the latter, if it should lower its quotations, plenty of this metal can be consumed in this district. My opinion is that American zinc and lead can be best introduced through energetic and discreet agents, who should first examine the field and obtain all

the information they can from actual consumers of both metals, as well as closely watch the maneuvers and tendencies of the "Berlin convention" and any other "trust" that may exist, and then guided by what they know affects contracts.

N. G. STUDER,
Consul.

BARMEN, *November 18, 1890.*

CHEMNITZ.

I am informed by Mr. Reit, director of the Saxon Machine Manufactory, that the bulk of lead and zinc used in this district is purchased through dealers in Berlin and Hamburg.

American lead and zinc can be introduced in larger quantities by stationing representatives of American producers and manufacturers at central points in Europe who will study the trade requirements and comply promptly and exactly with the demands of purchasers.

H. F. MERRITT,
Consul.

CHEMNITZ, *January, 1891.*

CREFELD.

There are no lead or zinc mines in the consular district of Crefeld.

FOREIGN LEAD AND ZINC.

The lead and zinc consumed in this district come mainly from mines situated in the districts of Dusseldorf, Cologne, and Aix la Chapelle, while a small quantity comes from Spain and Silesia. Lead and zinc in sheets, pipe, and paint are very extensively consumed. Lead pipe is almost exclusively used for water and gas plumbing purposes, and often for connecting buildings with the gas main in the streets. Lead paint is in use for all outside work of buildings, for all kinds of carriage painting, and also for the first two coats of paint for inside work. Sheet zinc is exclusively used for cornices, eve troughs, and water conductors, while zinc paint is always used for the last and finishing coat for inside painting. The price of lead pipe and paint is 4 cents per pound. Lead and zinc paints are manufactured very extensively in adjoining districts. Lead pipe is manufactured in Crefeld.

AMERICAN LEAD AND ZINC.

I am informed that American lead and zinc and their manufactures are not consumed in this district, but that all the lead and zinc consumed here come from mines in Germany and Spain. I would suggest

that American lead and zinc be brought into the large seaport cities and distributed by careful, judicious, and energetic agents throughout Germany. It would be wise to employ native German agents for the above purpose.

EVANS BLAKE,
Consul.

CREFELD, *December 15, 1890.*

DUSSELDORF.

INFORMATION REFUSED.

The only two establishments within this district are those at Selbeck and Lintorf, located about 18 miles from this city and some distance from the line of railroad.

I communicated with both and, being refused information, was obliged to go beyond the limits of my district to make answer to the several questions set forth.

DEPTH OF MINES.

The general depth of lead and zinc mining varies considerably, according to the location of the mines. The average may now be stated as 300 meters, or over 900 feet. Lead and zinc mining is much deeper than in past years and the machinery and means vastly improved.

METAL IN ORES.

The average per cent of metal in ores varies considerably at different mines. In and around Dusseldorf it will run up to 50 per cent, while at Schlesingen it is but 20 per cent.

METAL OBTAINED BY SMELTING.

From 8 to 12 per cent in the average metal obtained by smelting.

SMELTING PROCESS.

The process preferred in this section in smelting is by what is called the "Muffel-Oefen." This oven is now in general use. Those used in the immediate neighborhood are usually built three stories high, while in Schlesingen but two-story ovens are used.

COST OF PRODUCTION.

The cost will average 50 marks, or about $12 per ton of 2,000 pounds.

VALUE OF ORE AND SPELTER.

Value of the ore per ton of 2,000 pounds at the mines: Where 20 per cent, the value is 50 marks; where 50 per cent, the value is 150 marks.

Spelter will average 49 marks per ton.

ORE IMPORTS.

The present rate of production about meets current demands. Ore is frequently imported, never exported, and occasionally there is a surplus production of metal which finds a market in England.

STATUS OF PRODUCTION.

The production of ores is very little on the increase, say about 5 per cent only.

MINERS' WAGES.

The general average of miners' wages in Belgium is 3.18 francs per day; in Germany, from 3 to 3½ marks (72 to 84 cents). Skilled miners are employed in special classes of work and receive 4 to 5 marks per day. The latter rate of pay is, however, the exception and not the general rule.

FOREIGN LEAD AND ZINC.

Foreign lead and zinc are consumed only in a small degree in this district. The local production has about equaled the demand. When, however, the demand is greater, which has occurred at times, the needed supply is obtained from Belgium.

AMERICAN LEAD AND ZINC.

I have been informed by those who are supposed to know that American lead and zinc are not at all used in this section of Germany. In asking for the reason it is stated that on account of the great distance of the American mines, the cost of freight, and handling, and the present reasonably low rate of the same metal in this market, American material could not be introduced and sold in Germany with profit.

D. J. PARTELLO,
Consul.

DUSSELDORF, *December 26, 1890.*

FRANKFORT ON THE MAIN.

There are both lead and zinc mines in the district of Frankfort, the former at Ems, the latter at Friedrichssegen, both in the valley of the river Lahn. The mines have long been worked, and are operated by the most improved and economical methods. Applying to the results thus obtained the interrogatories submitted by the Department circular of August 14 last, we obtain the following exhibit of the lead and zinc mining industries in this region:

DEPTH OF MINES.

The depth of the mines varies from 300 to 1,500 feet, and is constantly increasing as the principal veins are more and more exhaustively worked.

METAL IN ORES.

The average per cent of metal in these lead ores is from 90 to 95; in zinc ores the proportion is from 75 to 80 per cent.

METAL OBTAINED BY SMELTING.

The per centum of lead obtained by the smelting process varies considerably; the yield of dressed ores ranges from 30 to 70 per cent. Dressed zinc ores yield from 45 to 55 per cent of pure metal.

SMELTING PROCESSES.

The processes which have been found most advantageous are as follows: Lead ores are first calcined to eliminate the sulphur, and are then reduced through precipitation by smelting in a blast furnace. Zinc ores are not reduced in this consular district. The ores from Friedrichssegen are all sent to Belgium and to furnaces in other parts of Germany. The process is, so far as can be ascertained, uniform at all these places. The ore (zinc blende) is first calcined and then reduced in clay retorts.

COST OF REDUCTION.

There being, as above stated, no reduction of zinc ores in this district, I am unable to ascertain the cost per ton of converting such ore into spelter. The cost varies much with the character of the ores, but the precise figures are not accessible here.

VALUE OF ORE AND SPELTER.

The value of ores varies according to their quality and richness. They are all reduced either at the mines or at works situated elsewhere which belong to the same proprietors. They are not, therefore, sold as ores, and have in that form no ascertainable open-market value. The value of spelter is controlled entirely by the London market. The maximum, minimum, and average prices per 100 kilograms (220 pounds) during the past two years, have been as follows:

Description.	1888.	1889.
	Marks.	*Marks.*
Lowest	31.37=$7.46	34.44=$8.20
Highest	41.48= 9.87	47.701=11.35
Average	36.14= 8.60	39.57= 9.42

At present (1890) the value of spelter is £25 or $131.50 per ton.

IMPORTS AND EXPORTS OF ORE.

There is no surplus production of lead ore in this consular district. On the contrary lead ores are imported to increase the local supply, and they are all reduced at the works near Ems and at one or two other

points. As to zinc there are, as already stated, no works in the district for the reduction of zinc ores, so that the whole product of the mines is sent to Belgium and to other parts of Germany for reduction.

STATUS OF PRODUCTION.

As to the increase or decrease of ore production. In 1862 the product of lead ores in the whole of Germany was 149,131 tons. This increased to 177,655 tons in 1882, and has since then remained nearly unchanged.

The production of zinc ores has, on the whole, slightly increased during the past ten years, the totals for the whole of Germany, by years, having been as follows:

	Tons
1881	659,530
1882	693,369
1884	632,040
1885	679,787
1886	704,216
1887	899,678
1888	666,699
1889	707,537

MINERS' WAGES.

Wages of miners range from 2.50 to 5 marks (that is, from 60 cents to $1.20) per day, according to the age, strength, and skill of the miner.

FOREIGN LEAD AND ZINC.

Are foreign lead and zinc consumed in this consular district? If so, to what extent and in what form?

It is impossible to obtain exact statistics on this question, as a consular district is a merely arbitrary division of territory for which no separate export or import records are kept. The question can, therefore, only be considered for the whole of Germany, which imported, during the first six months of 1890:

	Tons.
Pig lead	7,259
Litharge	477
White lead	755
Red lead	341
Spelter	4,142
Zinc, white or gray	1,901
Sheet zinc	60

The above imports of pig lead and spelter come principally from Belgium, where there are reducing works for both lead and spelter near the German frontier. The spelter imported from Belgium is made from the zinc ores exported from the German mines at Friedrichssegen, and may be, therefore, said to be practically of German origin. If we

compare the above figures with the exports of German lead and spelter, we shall see how distinctly Germany is an exporting country, and has much greater concern about a market for her surplus than for a supply of those metals from abroad. The exports during the first six months of 1890 were:

Description.	Exports.	Excess of exports over imports.
	Tons.	*Tons.*
Pig lead	18,477	11,218
Litharge	1,388	911
White lead	7,882	7,127
Red lead	3,409	3,068
Spelter	31,269	27,127
Zinc, white and gray	5,028	3,127
Sheet zinc	7,954	7,894

The foregoing exhibit of the excess of exports over imports will practically answer the twelfth and last interrogatory of the series, viz: 12. Are American lead and spelter, or manufactures of the same, consumed in this consular district; and, if so, how may the trade in them be further developed?

AMERICAN LEAD AND ZINC.

I am not able to ascertain that either American lead or spelter were ever imported into Germany, except at one time, about ten years ago, when, in consequence of some extraordinary rise in the market, a quantity of American pig lead was landed at Hamburg and Bremen. But this was only a temporary movement. How unpromising is the field for foreign lead and zinc in Germany will be apparent from the following table, which shows the total production of metallic lead and spelter in this country during several recent years:

Lead produced in Germany.		*Spelter produced in Prussia.*	
	Tons.		Tons.
1862	35,384	1885	128,911
1869	59,632	1886	130,814
1873	64,761	1887	130,445
1882	97,023	1888	133,280
1888	76,394	1889	135,972
1889	90,914		

Thus, through careful, thorough working of her own mines and large importations of lead ores, which are reduced in this country, Germany has become the second nation in the world in the production of metallic lead, which is at present, as usual, cheaper here than in the United States. Until the present conditions are radically changed by some contingency, which is at present very difficult to predict, there would seem to be little prospect of any important market being developed in Germany for American lead or spelter.

FRANK H. MASON,
Consul-General.

FRANKFORT-ON-THE-MAIN, *November 1, 1890.*

FREIBERG.

All the mines in this district are in the neighborhood of Freiberg and under control of the Government.

Some time ago I endeavored to obtain information through the officials in charge, and have only recently been able to get the very meagre details which I give herewith:

DEPTH OF MINES.

The depth of the Freiberg mines varies, but they are generally deeper than those on the Rhine. The deepest shafts have a depth of 600 meters. In 1883 the greatest depth was 565 meters.

METAL IN ORES AND SMELTING.

The Freiberg ores contain an average 0·11 per cent silver and 12 per cent lead.

The loss of metal by the smelting process varies so much, according to species of the ores, that no special details are obtainable.

SMELTING PROCESS.

The most convenient process for the smelting of the Freiberg ores is that known as the "*Bleiarbeit*" or lead labor.

Zinc is only found in the Freiberg mines in very small quantities.

VALUE OF ORES.

The value of the Saxon ore per ton amounts, as per the average of the preceding year, to 134 marks.

Zinc costs in London at present £25 per ton.

IMPORTS OF ORES.

There is no surplus production; on the contrary, other ores are imported and smelted in the Freiberg smelting houses.

STATUS OF PRODUCTION.

The production remains about the same from year to year.

MINERS' WAGES.

In regard to wages they vary from 40 pfennigs to some marks, from a boy to a skilled laborer, but details are not obtainable.

FOREIGN LEAD AND ZINC.

Only lead in blocks is imported from England; but little, if any, is imported from the United States, owing to its greater cost.

AULICK PALMER,
Consul.

DRESDEN, *January 15, 1891.*

HAMBURG.

No lead or zinc mining is carried on in this consular district.

FOREIGN LEAD AND ZINC.

Both of these metals enter but in a very small way into the manufactures of this district, most of them used here coming from other parts of Germany. In 1889 there were imported into this port from foreign countries raw zinc to the value of $26,744, of which zinc to the value of $5,414 came from the United States. The importation of rolled zinc into this port amounted in 1889 to $18,380, none of which came from the United States.

The greater part of the zinc imported came from Belguim and Great Britain.

The quantity of lead imported during the same year amounted to $175,722. It was imported from the following countries:

Chile	$57,355
Argentine Republic	818
Peru	48
Great Britain	35,440
Spain	33,812
Netherlands	17,047
Belgium	16,729
Palatinate	9,755
Holstein	997
France	863
Russia	737
Sweden	654
Bremen	23
Other countries	1,437
Total	175,715

AMERICAN LEAD AND ZINC.

American trade in these metals could, in my opinion, be stimulated here by the establishment of permanent agents, to whom full lines of samples would have to be furnished.

CHARLES F. JOHNSON,
Consul.

HAMBURG, *December 31, 1890.*

HARTZ MOUNTAINS.

The mining industry in this consular district, which embraces the duchy of Brunswick and the province of Hanover, is almost exclusively confined to the celebrated Hartz Mountains, and dates from the Middle Ages, having begun in the southern part of this mountain range in the

tenth and in the northern part in the thirteenth century. These mines yield, besides lead and zinc, silver, copper, and gold in various proportions.

DEPTH OF MINES.

The depth of the existing mines in this consular district is usually very considerable, the deepest pit being the Samson, so called, near Andreasberg, the present depth of which is 780 meters,* which shows an increase of 240 meters since 1820, when the depth was 540 meters. The present depth of the mine Herzog Wilhelm, near Clausthal, is about 560 meters; in the year 1830 it was about 500 meters. The mine Lauenthal's Glück, near Lautenthal, is about 600 meters in depth; in 1830 it was about 550. The mine Hülfe Gottes is now 340 meters deep; former depth not obtained.

METAL IN ORES.

The mine Samson, near Andreasberg, yields principally silver, besides lead, zinc, and copper ores, while the ores of the mines near Clausthal, Zellerfeld, and Grund yield mostly lead, with varying proportions of silver, zinc, and copper.

The ores from the mines in the vicinity of Clausthal, Zellerfeld, and Grund contain the said metals in the following proportions, to wit:

	Per cent.
Lead	59·033
Zinc	1·25
Copper	·14
Silver	·08

The ores from the mines near Lautenthal, as follows:

	Per cent.
Lead	59·5
Zinc	6·5
Copper	·4
Silver	·99

METAL OBTAINED BY SMELTING.

The net product of the lead ores obtained by the smelting process is from 93 to 95 per cent. The zinc ores do not undergo this process here, inasmuch as the lead and zinc ores are separated mechanically and the latter sold to zinc foundries outside of this district. Lead ores, with a very small percentage of zinc, are not separated from the latter, but are worked as lead.

SMELTING PROCESS.

The favorite processes for smelting the lead ores are, at present, the roasting processes. (Röst reductions processe.) The lead ores, as well as the lead ores containing a small percentage of zinc, are brought into

*1 meter = 39.37 inches.

the rotary furnace (Fortschaufelungsofen), and if containing a sufficient quantity of silicious acid it is reduced to lead-silicate, which, together with lime, is brought into smelting furnaces, and reduced to lead of liquation (Werkblei); then, after the silver and gold have been separated from the lead of liquation and the latter refined, the product is a marketable lead.

COST OF REDUCTION.

The cost of the reduction of the ores into spelter, including the value of the ores, is about 324 marks ($77.11) per ton of 2,000 pounds.

VALUE OF ORE AND SPELTER.

Inasmuch as these ores are not sold, but are worked up by the administration of the mines, their value at the mines can not be ascertained by an outside party.

The spelter is not sold, but is worked into marketable lead by the administration of the mines.

ORE EXPORTS.

There is no surplus production of these ores nor of spelter in this consular district, although occasionally small shipments are made to the United States.

STATUS OF PRODUCTION.

The production of these ores seems to vary from one decade to another, sometimes increasing, sometimes decreasing; but there is nothing to indicate that the supply is failing.

WAGES OF MINERS.

The wages of miners here at present are from 45 to 70 cents United States currency per day for experienced, and from 35 to 45 cents per day for inexperienced, miners.

FOREIGN LEAD AND ZINC.

Foreign lead in various forms is sometimes imported into this district from England and Spain, to be used in the manufacture of lead pipe, but not in large quantities.

AMERICAN LEAD AND ZINC.

As far as I have been able to ascertain, neither American lead nor zinc is imported into this district in any form.

A careful study of the quotations of these metals in the London market reports, which indicate the prices for Europe, will enable the American producer to judge as to the proper time for opening the trade with Germany; and good and responsible agents can always be found

here who would be willing to undertake the introduction of these articles from America for a commission on sales, as in the cases of bismuth and antimony, both of which metals are imported into Germany from other countries.

It may not be improper to remark that I had great difficulty in obtaining the above facts, owing to the extreme disinclination of the parties interested to impart the desired information.

L. AUSTIN SPALDING,
Consul.

BRUNSWICK, *November 30, 1891.*

MUNICH.

There are no lead or zinc mines within this consular district.

FOREIGN ZINC AND LEAD.

Foreign lead is not used here, so far as I have been able to ascertain.

Foreign zinc is used here to some extent. It is imported from England. Two Munich firms use zinc in the manufacture of ornamental and artistic figures and objects of various kinds. Another firm manufactures the commoner articles, such as pails, pans, and kitchen utensils. Still another turns out zinc in a form to be used about buildings, for roofs and the like.

I am not able to furnish statistics or give any further information on the subject. The Munich bureau of statistics has no facts in its possession, and none can be obtained from the chamber of commerce.

T. W. CATLIN,
Consul.

MUNICH, *November 5, 1890.*

SAXONY.

INTRODUCTORY REMARKS.

Lead and zinc mining in the Kingdom of Saxony is closely connected with mining in general, because lead and zinc are found only in small quantities by themselves, being principally intermingled with minerals containing silver, copper, antimony, arsenic, and sulphur; therefore a profitable production can be attained only by simultaneously transforming the aforesaid minerals into silver, copper, bismuth, nickelspeiss, arsenic, sulphuric acid, and other chemicals. In the twelfth century, when silver mining was begun in Saxony, lead was found as well as silver; but as silver was at that time found in large quantities, lead was not much sought after.

Zinc was found and known in the seventeenth century; Glauber in 1657 reported as a discovery that cadmia (galamine or galmey) was a zinc ore. The first large zinc works were built by Champion at Bristol, England.

I. Lead Mining.

Of the lead ores which are put to use in the extracting of lead in Saxony, the native sulphide of lead (galena) alone is worthy of mention; the following are rarely found: ceresite (white-lead ore) zinkenite, anglesite (sulphate of lead) and pyromorphite (green-lead ore). The two latter species are usually disposed of as show pieces for mineral collections. The lead ores are found in two districts of Saxony. These are:

(*1*) *Freiberg district.*—Many mineral veins start at the river Elbe, near Meissen, and continue in a southwesterly direction down towards the towns of Nossen, Freiberg, Oederau, Brand. The enormously large mineral veins of Freiberg, which are contained in gray gneiss, have for several centuries past furnished a superabundance of lead ores, and through them has been effected, of late, the profitable extraction in smelting silver and other minerals. The vein-stones (deads) are quartz dolomite, heavy spar, and carbonate of lime.

(*2*) *Upper mountain district.*—Now and then veins of lead ores have been found in gneiss and granite in the upper mountains near Marienberg, Annaberg, Schwarzenberg, Johann Georgenstadt, and far into Bohemia (Joachimsthal), but none have proven profitable either in the quality or quantity of the mineral. The lead ores form in these parts only short veins or nests, which often however show large quantities of silver.

Of actual lead mines from which only lead ores are extracted, there are none in Saxony; the lead ores are found in the silver mines, and on account of these ores containing considerable silver at times, they are used in the extraction of silver. Lead ores are rarely found in iron mines.

The depth of mines.—Mines are worked down to 600* meters, but at such depth the waters coming from the mountains cause many difficulties. Besides the expenses incurred in removing the ore are very great.

In order to be able to work the Freiberg mines with less trouble the Schönberger gallery (adit) was erected during the period from 1844 to 1877 at an expense of over 11,000,000 of marks.† This adit, from its mouth in the Friebischthal up to Freiberg, shows a length of 13,900 meters, and besides has been extended within the limits of the mines 17,500 meters.

On account of this adit all waters at a depth of 195·7 meters above the sea-level are led off their course, which is 94 meters deeper than any adit built up to date.

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* The meter = 39·37 inches. † The mark = 23·8 cents.

Klotsch reports in his "Ursprung der Bergwerke Sachsens" (origin of mining in Saxony), that several centuries ago minerals had been worked at a depth of 300 "lachter" (595 meters), and states that since that time no other underground workings have reached such depth.

The richest extractions of lead ore are obtained at 200 to 400 meters depth. For this reason particularly new holings (short side galleries) are erected in the various galleries at such depth. It is hoped that ores may be found in large quantities still farther down, and exploring shafts are built in view of this hope.

Blue lead contains from 40 to 85 per cent lead and 15 to 40 per cent sulphur. As a rule it also contains 0·15 to 0·20 per cent silver, rarely up to 1·09 per cent silver. According to an analysis made by Plattner, the pure blue leads of the Freiberg district contain 76·5 to 85·8 per cent lead. The raw minerals found show an average of 11·3 to 13·4 per cent lead, and are so concentrated through the finishing process as to make the minerals workable; pyro, morphite (89·7 per cent phosphate of lead, 10.3 per cent chloride of lead), and zinkenite, with 41·5 per cent protosulphide of lead (galena) 58·5 per cent antimonite.

The extraction of lead from the ores is divided into various methods which may be altered according to the different ores. As Freiberg is the only place in Saxony which has lead and zinc foundries, I shall give a description of their methods, but as they get the ores after they have been dressed, the dressing process will first be described.

DRESSING OF THE ORES.

The dressing or cleaning of lead ore is done for the purpose of clearing the lead of accompanying substances, such as antimony, copper, and arsenic ore, as also to detach such minerals as sulphide of zinc, barytes, etc., which retard the melting process. The minerals favorable to the melting are retained, together with such quantities of earthy minerals as adjunct to the protosulphide of lead as are necessary for the formation of the slags.

Among the raw ores of Saxony the lead ores are more or less closely connected with common iron pyrites, sulphide of zinc, copper pyrites, also with gneiss, quartz, and spar. All these ores used to be prepared (washed) by themselves at the various mining pits, but since 1888 a central preparing shed, worked by steam, has been established for a number of mining pits near Freiberg, where 150,000 kilograms raw ore are daily prepared. This shed is arranged on the following principles:

(1) The ores are gradually separated and taken away immediately after separation to avoid the unnecessary breaking up of said ores, which considerably impairs the machinery, and besides would cause loss of power.

(2) For rolling and sieving all the space possible is allowed; the least space for dressing, fine graining, and buddling.

(3) The dressing is continuous from beginning to end, and proceeds without interruption from the coarsest to the finest grain, so as to prevent all intermediate transportation or any accumulation of material.

The preparing shed is arranged in such a manner that the raw ores after the coarse bucking are lifted to the topmost gallery and thence tumbled down. The rubbish drops through the rinsing grate (Spülrost). The rinsed coarser parts get into the four receptacles stationed on the top gallery for breaking the stones; thence the mineral mass reaches together with the mineral which has dropped through the rinsing grate into a so-called double sieving-drum, thence into the coarse grain machine (Bergemaschine), while the waste of the sieving-drum reaches the "Leseband," from which the stuff ores and deads are gathered. The remaining intermixed pieces now reach the first pair of rollers (for coarse grain); having passed through these the broken ore comes to the second sieving-drum and the jigger (with five divisions) for "more than medium" grain (Uebermittelkorn). After leaving the jigger the ore comes to the second pair of rollers for "more than medium" grain; lastly to the third pair of rollers for fine grain. Having gone through these processes the ore has reached the lower floor. The broken ore is classified by the sieving-drums according to the size of grain, ranging from 9 to 4 millimeters diameter, and assorted into five grades by aid of the hydraulic self-acting jig (Setzmaschine).

The waste left after the last breaking of the ores is wetted and stamped in the stamping mill, together with other halvings (useless stuffs of the worked ores), and later on ground in the ore mill.

For fine-grain and slime-work the sieving-drums with fine-grain jigs are used; and in connection with these the "pointed trunk of Rittinger" with accompanying jigger-sweep or washing table, screen, and "Stromsetzmaschine."

In using this method of dressing, the largest quantity of protosulphide of lead shows "stuff" and barley shape and but little slime-form, whereas in stamping the halvings the protosulphide of lead is almost pulverized and scattered throughout the dust.

Since 1885 ores from 3 to 0·2 millimeters diameter have been separated by air-pressure and in five pipes (Düsen) assorted according to their specific weight. The use of this process gives this marked advantage over the dressing of the ores in huts, that one may know at all times how the product turns out; besides there can not be any loss of mineral, as is generally the case where the ores are washed, and again, the protosulphide of lead is far better concentrated by the air process.

The ores are sent, already dressed, from the several mines to the Freiberg smelting works where they are tested as to their lead and silver yield, at times also as to their copper yield, for the purpose of fixing their value and knowing the total output. The Freiberg smelting works have been erected with a view to handling ores from other parts

of the country as well as Saxony, to further insure its being a paying institution. Therefore the production of lead at Freiberg is considerably greater than could be accounted for by the total production of lead in Saxony.

Freiberg smelting works.

Description.	1889.	1888.	1887.	1886.	1885.	1879.	1876.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Quantity of dressed ores, dross, bucking ores, etc	42,397	41,868	36,588	38,093	36,294	30,450	22,713
Ore sent to foundry	30,697	29,523	26,660	29,809	28,422	23,000	22,649
Ore received from other parts	11,600	12,250	10,850	8,200	7,800	7,380	.....
Lead production of foundry	6,571	5,788	4,373	4,779	4,525	6,328	.....
Estimated output of lead from the ores in Saxony	2,050	2,050	1,860	2,160	2,270	3,000	.....

All sorts of lead, silver, and copper ores are purchased from foreign parts, viz: The Hartz Mountains in the north of Germany, Kärnten in Austria, Spain, Sardinia, Belgium, Sweden, but principally from North America.

The lead and copper ores of Austria had an average value per ton of 600, 600, 630, 800, and 550 marks for the years 1885, 1886, 1887, 1888, and 1889, respectively.

The lead ores of Saxony are largely mixed with rubbish, and those derived from foreign countries are also to a certain extent; for this reason they are roasted and subsequently subjected to a reducing smelting so as to receive raw lead.

ROASTING.

The roasting changes the native sulphide of lead and other pyrites into oxides and removes not only the sulphur but partly also such foreign substances as arsenic, antimony, etc.; but as the ores which are to be worked vary greatly in their component parts, and as a large quantity of said ores must play part in the extraction of sulphuric acid, the roasting is done in various ways; mounds, reverberatory furnaces, kilns, and roasting furnaces are used.

The mounds have air-drains into large underground passages; mounds are not much in use, as they require too much fuel and the roasting performed by them is often irregular. The ore put into the furnace is from the size of a walnut to the size of a hen's egg and must contain large quantities of pyrites, the burning sulphur of which maintains the required temperature after the wood foundation in the furnace has been consumed by the flames.

The reverberatory furnaces used at Freiberg are of one and two hearths construction, respectively; to use these it is necessary that the ores be pulverized. The native sulphide of lead and all lead ores which contain only a small quantity of sulphur are roasted in these furnaces, also the siliceous and blend ores which have received a preparatory roasting in the kilns.

The kilns are used for the purpose of manufacturing sulphuric acid; the siliceous and blend ores are roasted in the kilns only, provided they contain sulphur sufficient to be of use in the manufacture of sulphuric acid. The gases emanating from the kilns—which contain sulphurous acid—pass through long channels where they cool off and next enter into the lead chambers of the sulphuric acid works.

As the lead ores are not thoroughly roasted in these furnaces (only 7·10 per cent sulphur), they now come into the reverberatory furnace.

Blendes and pyrites from the size of a hazelnut to the size of a hens egg are roasted in the kilns; those ores which come to the smelting works in pulverized form are roasted—provided they contain sufficient sulphur—in the "Gerstenhöfer" or "Rhenania" furnaces for the purpose of extracting the sulphuric acid.

The siliceous slick usually contains about 60 per cent pyrites, 18 per cent native sulphide of lead, and 22 per cent rubbish.

The blende slick does not contain more than 15 per cent zinc. Blendes and pyrites which contain but a small amount of sulphur are put into the "Fortschaufelungs" furnace. The dross (sweepings) is roasted in the almond furnace after it has been stamped into slick and partly dressed, partly added in other smelting processes.

SMELTING PROCESS.

The mixing of the ores is attended to after they are roasted and is done in such a manner as to have them show a fixed amount of metal.

At the Freiberg mines experience has taught that the produce of metal from the lead ores is most favorable where the latter show an average yield of 35 to 40 per cent lead and 0·15 to 0·18 per cent silver.

The pure native sulphide of lead is never melted by itself, but mixed with lead, siliceous, and other dry silver ores.

Next comes the filling (loading) of the ores for the purpose of adding to those ores which are lacking the necessary stuffs for the slag formation, fluxing ores (quartz, limestone, fluor, basic slag, etc., according to their quality) in order to scorify minerals such as sesquioxide of iron, stannic oxide, etc., during the reducing smelting of the protoxide of lead. As the temperature can not be so minutely regulated, this process does not turn out as might theoretically be expected, though the mixing may have been executed with utmost care. On account of the same reason the protoxide of lead is generally scorified, whereas other reduced metals mix with the work leads. For receiving the silver, flux containing lead is used in the mixing, also leavings of the smelting products: plumbiferous slag, unclean litharge, lead scum, dross, matt of lead, lead speiss, argentiferous remains.

The smelting is done in the "Pilz" blast furnace. As fuel, and at the same time as reducing agents, charcoal and coke are used. The following mixings are frequently made:

Orework: (1) roasted lead ore, 27·5 tons; "Rotglassabbründe," 2·5; slag of ore work, 27·5; (2) roasted lead ore, 27·5 tons; flux, containing lead, 0·6, and slag of ore-work, 25. (3) Roasted lead ore, 25 tons; coarse metal, 3·5 (roher Stein); own slag, 20 to 25 (eigene Schlacken).

Slagwork: Slag of ore work, 42·5 tons; roasted matt of lead, 9; flux, containing lead, 2·2.

All leadslag produced at Freiberg is mixed with raw and roasted matt of lead, flux containing lead, limestone, and fluor.

The production of raw leads depends upon the quality of the lead ores, and is therefore variable; it is usually about 60 per cent of the lead yield; very seldom reaches 90 per cent.

RAW LEAD.

Not only roasted pure lead ores are melted at Freiberg, but also large quantities of roasted pebbles (Kiese), the argentiferous remains of the red-glass (Rothglas) and zinc-production the plumbiferous slags and sweepings, and matt of lead. For this reason the raw leads contain comparatively much silver, but are also extensively mixed with copper, tin, antimony, and arsenic. The raw ore contains 0·43 to 1·79 per cent silver, 0·35 to 6·25 per cent antimony, 0·13 to 1·82 per cent arsenic, 0·7 to 1·49 per cent tin, besides copper and bismuth in small quantities, and in usually still lesser quantities zinc, iron, sulphur, nickel, and cobalt.

To part the silver from the lead the raw lead must be subjected to eliquation in the lead eliquating furnaces, which separates about 90 per cent of the copper contained in the ore, besides nickel, iron, cobalt, sulphur, and a corresponding quantity of arsenic with the liquation thorns. The result is 95 to 98 per cent eliquated raw lead.

To remove tin, arsenic, and antimony the eliquated leads are refined; to this purpose they are molten in the refining furnace and partly oxidated, which in the main causes the connection of stannic acid, arsenic acid, and antimonic acid, with protoxide of lead. This refining process leaves about 74 to 82 per cent of the mineral lead brought to the furnace as refined raw lead, and 78 to 90 per cent refined raw lead of the slag lead brought to the furnace; this refined raw lead contains 0·4 to 0·8 per cent silver, 0·10 to 0·20 per cent copper, 0·06 to 0·11 per cent bismuth, small quantities of antimony and tin, and here and there traces of arsenic. At this stage the elimination of silver from the raw lead begins. After painstaking trials and most minute calculations of the cost, it has been found that a combination of Pattinson's and Perkins's method is the most profitable for crystallizing raw lead, for compared with the Pattinson method it reduces the cost 15 per cent, besides, it facilitates the extraction of bismuth. The combination consists in doing away with the Pattinson method at that boiler of the battery in which bismuth is expected to be found, and where with the least work the Pattinson method produces the largest possible quan-

tum of rich lead. For instance, if the raw lead is brought to the second (resp. 3) boiler the pattinsonizing is discontinued in the eighth (resp. 7) boiler. All refined raw leads are brought to the different boilers according to their silver yield, which must be at least 0·01 per cent, and are pattinsonized by the two-thirds system with a silver yield of 2 per cent in rich lead, 0·1 per cent in poor lead. The rich lead is brought to the refining hearth, the poor lead goes through the Perkins process (Parkesiren).

Parkesiren, 20,000 kilograms raw lead, with 0·01 per cent silver, require 215 kilograms zinc and the use of the zincky liquidation lead and poor scum; the result is 0·35 per cent dross, 2·25 per cent rich scum, used for distillation (with 0·0153 per cent gold, 4·051 per cent silver, 53·2 per cent lead, 2·68 per cent copper, 39·7 per cent zinc), and 98·95 per cent zincky poor lead.

Simultaneously with the transfer of the zincky poor lead from the silver eliminating boiler to the refining furnace, which is already at red heat, its elimination of zinc commences. If found in large quantities the scum of the refining furnace and the poor-lead boiler are again put into the refining furnace to smelt the remaining lead; only then, being then considerably reduced in weight, are they used as leaden flux for the working of the ore.

The distillation of the rich scum is done as follows: An air furnace with a round shaft contains a blacklead crucible (Morgen's patent); this crucible is filled with rich scum (which is mixed with 1 per cent of coarse pounded charcoal), closed hermetically, and connected through an emission pipe with a condensator. The shaft of the furnace is now filled with coke halfway up to the top of the crucible and redhot coke added; the crown is affixed to the furnace, which is then closed with a cover. A charge of 225 kilograms rich scum must remain in the furnace nine hours, and results in 57·17 per cent rich lead—which contains 7·35 per cent silver and 0·0186 per cent gold—29·54 per cent metallic zinc, 6·35 per cent powder of zinc and zinc waste, 5·85 per cent crucible waste. Thus the refined raw lead eliminated gives the following result: Lead with 0·84 per cent silver (using 9 boilers): 52·5 per cent lead (Handelsblei) and 38·9 per cent rich lead at a cost of 1 mark 30·17 pfennig; lead with 0·42 per cent silver (using 8 boilers): 73·52 per cent lead and 17·16 per cent rich lead at a cost of 1 mark 13·70 pfennig.

All processes of smelting leave behind foreign products, which are worked into marketable material if it is in any way possible. The siliceous and blend ores show, as a result of their containing tin antimony, arsenic, etc., a raw lead which, after being refined, produces: 3·1 per cent tin scum, 3·07 per cent antimony scum, 3·95 per cent arsenic scum, and 6·45 per cent scum similar to litharge.

Tin and antimony scum 0 refined are tin and antimony lead; they vary in quality, containing, on an average: Tin scum: 70·3 per cent protoxide of lead, 12·5 per cent stannic oxide, 12·5 per cent antimonic

acid, 4·75 per cent arsenic acid, 0·6 per cent oxide of copper. Antimonic scum: 59·2 per cent protoxide of lead, 11·9 per cent antimonic acid, 2·2 per cent stannic oxide, 12·2 per cent arsenic acid, 1·4 per cent silicic acid, 2·5 per cent alumine, 2·7 per cent sesquioxide of iron, 0·3 per cent oxide of zinc, 1·8 per cent lime, 0·3 per cent magnesia, 0·2 per cent sulphuric acid.

The five processes which tin and antimony scum must undergo are almost identical for both:

(1) *Eliminating.*—The smelting of the scum in the raw lead refining furnace with red coal as a second material for the purpose of the reduction of protoxide of lead and the extraction of silver, the product is: (*a*) 53 per cent eliminated tin scum and 46 per cent raw lead; (*b*) 60 per cent eliminated anti mony scum and 38 per cent raw lead.

(2) *Reducing.*—Consists in a reducing smelting in a shaft furnace; the result is: (*a*) 55 per cent refined tin lead (zinnfrischblei); (*b*) 70 per cent refined antimony lead (antimonfrischblei).

(3) *Taking off the tin.*—The tin is taken off the refined tin lead (which contains 11·8 per cent tin and 10·3 per cent antimony) through an oxidizing smelting in the raw lead calcining furnace, which yields 57 per cent antimony-lead and a high grade of tin powder. The latter and also the flux of slags containing tin must be reduced through repeated fining in shaft furnaces; the product is tin and antimony lead.

(4) "*Gutschmelzen*"?—The remelting of tin and antimony lead in a cast-iron boiler for the purpose of producing tin and antimony lead as marketable articles; the result is: (*a*) 93 per cent tin lead; (*b*) 85 per cent antimony lead.

(5) *Remelting* or transforming of the tin and antimony scum slags into slags devoid of metal. The result of this process is: (*a*) 26 per cent tin slag lead; (*b*) 15 per cent antimony slag lead. The antimony dross nets 72·5 per cent antimony lead. The total result is therefore as follows:

(1) Tin scum: 1,000 kilograms raw lead yield on an average 31 kilograms tin scum, or 3·1 per cent. Tin scum averages 46·27 per cent raw lead, 33·19 per cent antimony lead, 19·33 per cent tin lead.

(2) Antimony scum: 1,000 kilograms raw lead yield on an average 30·7 kilograms antimony scum, 3·07 per cent. Antimony scum averages: 38 per cent raw lead, 34·83 per cent antimony lead.

The raw lead produces, therefore, 0·6 per cent tin lead (containing 33 per cent tin, 14 per cent antimony, 1 per cent arsenic) and 2·1 per cent antimony lead (containing 15 per cent antimony, 2·5 per cent arsenic, and 0·3 per cent tin).

(3) Arsenic scum, reduced, yields raw lead.

(4) The first litharge is used for the lead work as flux containing lead.

Other minor products are: (1) Lead oxide, which is gotten during the silver refining process and, depending on its quality, is either a marketable article or material to aid in the working of the lead; the

medium quality also is ready for the market, if after being reduced it is found to be sufficiently pure. (2) Lead smoke. Minute particles of minerals carried away during the roasting and smelting process by the draught and vapors would entail a loss of mineral; these vapors and gases are led through long passages into lead towers; within these towers are six alternately stationed lead roofs, kept wet by constantly dripping waters. The smoke which settles on these roofs is transferred through lead pipes from the lead towers into a clearing cistern.

These lead towers are 5·58 meters high and have a capacity of 33·48 cubic centimeters; they are removed after seventy work days to be thoroughly cleared. This clearing takes a day's work, but does not interfere in the least with the roasting. Above method of gathering the lead smoke results in getting 1·50 per cent of the total quantity roasted, whereas the old method used formerly netted only 0·27 per cent; besides, the constantly dripping water causes the extraction of arsenic acid and sulphate of zinc, which, though it reduces the quantity of smoke lead, increases its silver and lead yield.

The gases leaving the condensating apparatus are led through a channel (510 meters long) to the chimney, which is 140 meters high, thus reaching the air at such a height as to remove all fears of their endangering effect on vegetation.

II. Zinc Mining.

Zinc mining in Saxony is not of such importance as lead mining.

Among the zinc minerals necessary for the production of zinc only sulphide of zinc is found in large quantities. In the Freiberg mines they are found most frequently in connection with native sulphide of lead, iron pyrites, arsenic pyrites, and quartz.

Previous to 1859 sulphide of zinc was thrown over the dump as having no value; since that time it has been used at the Freiberg mines, though even there it has been used and purchased in large quantities only since 1866. Something worth mentioning is the Freiberg black sulphide of zinc, with a specific weight of 3·95 to 3·99, and contains 44·8 to 51·7 per cent zinc, 11·9 to 13·5 per cent iron, 32·5 to 33·7 per cent sulphur, small quantities of copper and tin, now and then silver and cadmium.

As a mechanical associate the Freiberg sulphide of zinc comprises almost always small quantities of tin ore.

Other zinc ores, such as sulphate of zinc (with 28·09 per cent oxide of zinc) and tennantite (with 8·89 per cent oxide of zinc), are of rare occurrence and therefore of but little importance in reference to the extraction of zinc.

Calamine, the ore most used for the extraction of zinc, is not found in any part of Saxony.

Sulphides of zinc are found at a depth of from 200 to 500 meters together with silver and lead ores, and never found isolated in quantities. The yield of the sulphides of zinc varies greatly; they contain

from 6 per cent to 45 per cent zinc, never more than 60 per cent. Ores containing less than 30 per cent zinc were not accepted at Freiberg until last year; now the minimum is 28 per cent.

If recently-made attempts should prove that the works can make it pay to concentrate the poorer grades of ores, which are to be had in large quantities, but have until now been neglected, some mine pits in the upper mountainous regions would be again put into working order.

ORE DRESSING.

The dressing of the sulphides of zinc is practically identical with the dressing of the native sulphides of lead, which latter process has already been described in detail, but, as the black sulphides of zinc contain as much as 33 per cent iron, their specific weight equals the specific weight of the accompanying common pyrites; this makes the separating of the pyrites from the sulphides of zinc a difficult proceeding, although the ores may be ever so carefully assorted and sieved; for which reason the sulphides of zinc are prepared and dressed apart from the other ores. Still further difficulties are encountered in the roasting of the sulphides of zinc on account of their compactness which necessitates their breaking up into grains averaging in size from 0·2 to 2·5 millimeters and here again more trouble is frequently encountered caused by the conglomeration of the sulphides and common pyrites in such a manner as to make their separation an impossibility; they must therefore be dressed simultaneously.

Pure sulphides of zinc are extracted from the mine pits of Saxony in small quantities. Those found among the raw ores can at times be only partly used to aid the extraction of zinc. However, zinc being a necessary requisite to the elimination of raw lead, zinc ores are brought from foreign countries (Spain, Sardinia, Austria, Belgium, Sweden), to keep the Muldner zinc works agoing. The latter works were closed in 1888 for the want of ores. Their yearly production of zinc amounts to 200 to 250 tons. Six to nine workmen are employed there.

ROASTING.

Black sulphides of zinc (with 33 per cent zinc) are found most frequently. The roasting of these is difficult, as it often happens that the sesquioxide of iron and oxide of zinc form a connection which can not be reduced by the usual temperature of zinc furnaces. Such foreign substances greatly reduce the value of the blende. The value is naturally determined by the amount of metal the ore contains. The sulphides of zinc which are delivered in blocks are first roasted in the kilns, then pounded in the stamping mill, lastly being subjected to a final roasting in the "Fortschaufelungs" furnace.

Within twenty-four hours 500 kilograms are roasted to 1 per cent sulphur, which process consumes 2·2 hectoliters common coal.* The slick

* The hectoliter = 2·835 bushels.

is roasted in the "Gerstenhöfer" furnaces; during this process the arsenic reaches the condensing chambers, the sulphuric acid the lead chambers. The zincky remains, containing about 10 per cent sulphur, are carefully roasted in the reverberatory furnace to 1½ per cent sulphur, thus preparing the ore for the production of zinc. The ore loses about 16 per cent while being roasted, and a loss of zinc of 2 per cent.

DISTILLATION OF ZINC.

The roasted zinc ore is subjected to the silesian method of distillation, viz, 2 distilling furnaces with 76 muffles; these are regenerative furnaces, with brown coal-gas heating. Each muffle contains 50 kilograms pulverized blende, which is mixed with 25 kilograms brown coal coke; the latter is necessary for reducing the oxide of zinc. Twenty-four hours' distillation yields 16 kilograms zinc from one muffle. The roasted ore to be worked contains generally from 37 to 40 per cent. zinc. Zinc ores containing 6 to 8 per cent lead are not worked if it can be avoided, because in roasting the blende the lead turns into oxide of lead, which in the distilling process spoils the refractory and rather expensive receptacles used in the distillation.

ORE MINES OF SAXONY.

The ore mines of Saxony have been a failure from a financial point of view for a number of years. The consequence was that every year added to the number of mine pits lying idle, as the lessees did not care to defray the running expenses where probabilities were that the plant would not clear sufficiently to warrant such expenses. In the year 1889 only six mines paid dividends to their stockholders, and whereas in 1875 344 mine pits were let by their owners, only 196 were let in 1889; of these less than half were being worked.

Mine statistics.

Year.	Number of rented mine pits.	Area of rented mine pits of Saxony.	Number of miners employed.	Active mine pits.	Mines producing lead ores.	Miners' wages per annum.
		*Hectares.**				*Marks.*
1889	196	19,201	7,169	92	17	645
1888	200	19,086	7,408	95	17	625
1887	206	19,474	7,673	94	17	615
1886	226	19,906	8,053	100	21	586
1885	227	20,900	8,294	104	23	.....
1879	268	20,793	7,832	122	26	.....
1876	327	26,580	7,828	129	25	.....

*The hectare = 2.471 acres.

Column 2 shows that the area of rented mine pits was proportionately reduced; column 5, stating the number of mines that yielded lead ores, shows that it has been the same during latter years, but was previously also larger. This may also be said of the zinc mines.

Column 3 shows that in 1885 900 more miners were employed than in 1888; the total production of the mines varies, nevertheless, but little from the average during the last five years. The raw ores yielded during these five years on an average 3,476 tons lead, 81 tons zinc, 0·06 kilograms gold, 33,920 kilograms silver, 17·7 tons copper, 425 tons arsenic, 4,068 tons sulphur, 1·9 tons nickel and cobalt.

The difficulties encountered in ore-mining are not only to be accounted for by the small quantities of ore found, but—and this was the chief cause—because the mine pits belonged to small companies and private parties, who either did not want to expend more money than they could possibly help, or were lacking the required funds.

To raise the mining industry the Government purchased in 1886 the six largest mines near Freiberg (which together employed 3,170 miners), with an area of 10,769 hectares, or more than half of the mining districts of Saxony. Since that time mining at these pits has decidedly improved, the quantities of the several ores have increased and the production of minerals in the Freiberg district during 1889 has been the largest within ten years; still, the value of that year's production was less than the value of the production in 1888, when it amounted to 5,095,278 marks, whereas, in 1888 only 4,989,776 marks. This difference is accounted for by the depressed price of silver.

The value of the silver production is three-fifths of the total value of all ores, the value of lead amounting to only one-ninth of the total value. Both these branches of mining (i. e., silver and lead) are as one, because almost all the silver found is extracted from the native sulphides of lead, comparatively little from silver ores and argentiferous blendes. Though prices of mineral in general were depressed, the wages of miners were increasing and the price of coal rose steadily.

The Freiberg works consumed in 1887 47,900 tons of coke, black and brown coal, 611 cords ("Klafter") of wood, 59 double carts of charcoal.

The wages of ore-miners have always been less than the wages of coal-miners; in 1888 the latter received 896 marks, in 1889 948 marks per annum, but continually give vent to their dissatisfaction.

The Government has not only purchased the larger part of the mine pits and taken their management into its own hands, but has also partly enlarged the foundries, partly connected other works with them, as for instance: two sulphuric acid factories employing 176 men; these plants manufacture annually 550,000 marks' worth of sulphuric acid; one sulphate of copper factory, which turns out 500,000 marks' worth of sulphate of copper annually; a factory for leaden ware; a gunshot foundry, which two latter consume a considerable quantity of lead.

The raw lead and manufactured leaden ware are sold to German firms. Jung & Lindig's factory at Freiberg use 1,500 tons of lead a year for the manufacture of lead pipes, sheet metal, and molds. The tin foundry of W. Pitz at Freiberg consumes annually 50 tons of lead.

Sale of lead and lead articles of the Freiberg works.

Year.	Assay lead, soft lead, antimony lead, litharge lead, smoke tin lead.		Coarse and fine shot for various purposes.		Lead plate.		Lead pipes and wire lead apparatus.		Total of lead products.
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
	Tons.	*Marks.*	*Tons.*	*Marks.*	*Tons.*	*Marks.*	*Tons.*	*Marks.*	*Tons.*
1889	4,860·9	1,283,052	210·2	60,341	1,094	315,936	406·7	124,004	6,571·9
1888	4,236·8	1,154,554	299·2	87,423	674·7	203,385	577·3	187,632	5,788·2
1887	2,334·7	598,533	203·9	56,938	801·8	224,119	1,032·8	303,030	4,373·4
1886	2,627·7	618,594	282·0	76,583	670·6	188,918	1,199·1	345,479	4,779·5
1885	2,246·7	487,518	167·6	43,357	863·8	207,033	1,246·8	316,599	4,525
1879	5,252·1	1,389,496	105·6	35,862	254·4	77,255	716	220,541	6,328·1
1876	3,581·9	1,472,954	111·2	53,635	285·4	128,965	483·7	227,953	4,462·3

In the year 1612 there were nine foundries in and near Freiberg. In 1710 the Government started a so-called general smelting administration, which originated a market where the ores were tested after a uniform method and sold at schedule prices.

In 1712 all the mine-owners of Freiberg declared their intention of delivering all their ores to this market. The immediate cause was the increase in size and importance of the Government's foundries, reducing the number of foundries owned by private persons, and finally stopping them entirely.

Of late years, all mines and foundries have been connected by rail with the railways, which are run by the Government. This accelerates the transfer of ores, coal, etc., besides reducing the cost of transfer.

The only ore-smelting works in Saxony, with the exception of the works at Altenberg, are the Government works at Freiberg, which at the same time represent the largest market for sale and purchase of ores in the world.

It is expected that mineral mining will net larger profits than heretofore, firstly, by introducing a cheaper and better method for dressing the ores; secondly, by using the rock drills more extensively. On account of the low price of metals, the poorer grades of stuff could not be used profitably; to this is to be added the fact that the wet stamping and washing of the raw ores on the sweep tables did not yield all the useful minerals they contained.

THOMAS H. PETERS,
Commercial Agent.

UNITED STATES COMMERCIAL AGENCY,
Plauen, May 8, 1891.

STETTIN.

There are no mines of lead or of zinc in the consular district of Stettin.

CONSUMPTION OF LEAD AND ZINC.

Zinc is used in the district by the shipbuilders at the Vulcan and other works. Most of the above material is furnished by the mines of Upper Silesia, which keep large quantities in storage at Stettin, and when freights are low to America are shipped with the following values, to wit: For the fiscal year ending June 30, 1889, $54,097.80; for the fiscal year ending June 30, 1890, $43,682.32. Outside of the small demand from the shipbuilders there is no market here for zinc or lead in any form.

AMERICAN LEAD AND ZINC.

American lead and zinc, etc., are not consumed in this district. As there is so little demand for the articles, and as the market is oversupplied by the Silesian mines, it would be unremunerative to attempt to introduce them.

JAMES C. KELLOGG,
Consul.

STETTIN, *September 18, 1890.*

HOLLAND.

Neither lead nor zinc mines are found in the Netherlands. Thus, as to questions 1–10 inclusive of the circular, no answers from this consulate can be returned.

FOREIGN LEAD AND ZINC.

Lead in pigs is imported and dealt in, and exported under the following mining marks or brands: "Stolberg," "Emserhütte," "F. C. B.," "Michernich," "Eschweiler" (all of Germany), and "Dumont Frères" (Belgium).

The Governmental report for the calendar year 1889 shows that there were imported into the Netherlands for consumption during that year, in pigs and old lead, 8,446 net tons. Of this total 7,376 tons (seven-eighths), were received at the port of Rotterdam, and came from countries wherein it had been mined, as follows: From Germany, 7,366 tons;

from Belgium, 705 tons; England, 325 tons; Sweden, 19 tons, and from Italy, 31 tons.

Imports of lead ore into the Netherlands during the calendar year 1889 aggregated 4,082 tons, of which total 990 tons, or nearly one-fourth came to the port of Rotterdam, these ore shipments being from producing countries as here stated: From Italy, 3,030 tons; from Germany, 578; from other European countries, 474 tons.

The Netherlands imports of manufactured lead in 1889 amounted to 919 tons, of which 365 tons, or more than one-third, were delivered at Rotterdam.

I have stated above, and the official report from which I have my figures states, that all these several imports "were for consumption in the Netherlands." As a matter of fact, lead being free of duty in this Kingdom, imports for actual consumption and imports for shipments in transit to other countries are all grouped as "for consumption." But this is misleading. Of the 8,446 tons of pig, 4,082 tons of ore, and 919 tons of manufactured lead shown above to have been imported, 4,392 tons of pig, 3,058 tons of ore, and 488 tons of manufactured stock were at once exported on through bills of lading, mostly to Great Britain. There were thus left as the actual consumption of the Netherlands for the year only 4,053 tons of pig, 1,023 tons of ore, and 430 tons of manufactured lead.

As to the zinc trade in the Netherlands I have to report my inability to obtain statistics entitled to credence; and to add that zinc in pigs is but rarely dealt in at Rotterdam. Utrecht and the Hague are the places of zinc manufacture, but in those cities the industry is comparatively very slight.

AMERICAN LEAD AND ZINC.

American lead and zinc and manufactures thereof are not, so far as I am informed, consumed or called for in the Netherlands. The controlling reason is, I surmise, that American lead in the city of New York has a present value of $99 to $101 per ton (my authority is late New York market reports) while the average price of German and Belgium and English and Swedish and Italian pigs in 1889, delivered in Rotterdam, was 22 guilders per 100 kilos, or less than $90 per ton of 2,000 pounds. Add to the New York price above quoted the cost of ocean freight—at this date $2 to $2.50 per ton—and the question why American lead is not found in the Netherlands markets seems to be answered.

WALTER E. GARDNER,
Consul.

ROTTERDAM, *September 26, 1890.*

ITALY.

FLORENCE.

There is no lead or zinc mining in this district.

FOREIGN LEAD AND ZINC.

Both lead and zinc are principally introduced into Tuscany, via Leghorn and Genoa, from England, Belgium, and Germany, in the form of zinc in sheets and kitchen and toilet articles, and lead in gas and water pipes, bars, and cakes.

AMERICAN LEAD AND ZINC.

So far as I can ascertain no American lead or zinc has as yet been introduced into this market. In my opinion the best manner of doing so would be to deposit different varieties of such goods with some reliable firm dealing in that line in Florence; for example, the "Emporio Franco-Italiano," who have also a large establishment in Rome, and who deal extensively in American goods, thus saving, in the beginning, both rent and taxes, two considerable items. This firm, for a fair commission, would cheerfully undertake to forward the interests of American producers, and they are regarded as entirely reliable.

ISAAC R. DILLER,
Consul.

FLORENCE, *October 7, 1890.*

GENOA.

INFORMATION WITHHELD.

Parties interested in the lead and zinc industry in this section of Italy most carefully avoid giving statistics that will in any way, shape, or form enlighten "outsiders." The utmost conservatism is practiced in the business from the owners and managers down to the lowest operative. For these reasons it has been exceedingly difficult to procure even the meager information presented below, and for similar reasons certain questions in the circular can not be answered.

PRODUCTION OF ORE.

The answer to this question is not direct, neither are the statistics wholly confined to the province of Genoa. Work had to be done outside the limits of this consular district in order to obtain certain information from within.

The lead and zinc mining in Italy, that is to say, calamine or blende, amounts to about 130,000 tons per annum; 114,000 tons are mined at

Iglesias, Sardinia, about 10,000 tons at Bergams, northern Italy, all calamine, and 6,000 tons, blende, at Alghero, Lake Maggiore. The last-named mine is nearly exhausted.

Galena or lead ore is also found in Iglesias, Sardinia; the annual output is about 35,000 tons. This is smelted at Pertusola, near Spezia, by the Continental Lead and Iron Company (English firm).

There has been a decrease of 10 per cent annually, in lead and zinc mining for the past few years.

METAL IN ORE.

The average per cent of metal in the ores is as follows: About 33 per cent of zinc from calamine, and about 50 per cent of lead from galena.

SMELTING PROCESS.

Answers can not be obtained. The smelting process, the average per cent and value of metal are secrets the company will not reveal. As to zinc, there are no smelting establishments for this metal in Italy.

VALUE OF ORE AND SPELTER.

One ton of calamine is worth from 150 to 180 lire,* according to the quantity of zinc contained in it, which varies from 30 to 56 per cent. calamine mines yielding less than 30 per cent of zinc are abandoned.

The value of galena varies from 200 to 600 lire per ton; according to the quantity of silver it contains.

The value of spelter here is the same as in the London market. Prices change so frequently that exact quotations can not be given.

IMPORTS AND EXPORTS OF ORE.

The zinc ore is totally exported to Belgium, England and France, for the reason that there are no smelting establishment for this metal in Italy. Lead ore is smelted at Pertusola, near Spezia, as before stated.

STATUS OF PRODUCTION.

The production of ores is decreasing 10 per cent every year.

WAGES OF MINERS.

The wages of miners varies from 46 cents to 96 cents per day.

FOREIGN LEAD AND ZINC.

It is estimated that about 7,000,000 lire or $1,351,351 worth of manufactured zinc, —chiefly sheet zinc, —is annually imported into Italy from

*The lire = 19.3 cents.

England, Germany and France. Most of this purchase is discharged at Genoa.

Foreign lead is not used in this district.

AMERICAN LEAD AND ZINC.

No American lead and zinc of any kind are imported into the consular district of Genoa.

There is no reason why American zinc can not be sold here. But it must be properly introduced by parties interested in the traffic and sold as cheaply as European products.

It is labor lost to send either letters or circulars to dealers here; they will not take the pains to have them translated when they can personally see, and get prices of goods from representatives of English, German, and French houses, who are constantly traveling through the cities of Italy at all seasons.

JAMES FLETCHER,
Consul.

GENOA, *December 18, 1890.*

LEGHORN.

As there are no lead or zinc mines within this consular district, no replies are necessary to questions from No. 1 to 10, inclusive.

FOREIGN LEAD AND ZINC.

Lead and zinc are imported into this district under the following heads: Cakes, pieces, sheets, tubes, types, balls, and shot. During the year 1889 the importation was as follows:

LEAD.

	Kilograms.*
Cakes and pieces from:	
France	126,303
Greece and Malta	2,695
England	12,295
Egypt	5,051
Sheets and tubes (from France)	20,180
Types (from England)	419
Ball and shot from:	
France	3,382
Germany	2,052
England	82

Amounting in value to 61,107 Italian lire, or in American currency $11,793.65.

*The kilogram=2.205 pounds.

ZINC.

	Kilograms.
Cakes and pieces from:	
Belgium	9,232
France	30,051
Germany	78,300
England	26,924
Sweden and Norway	199,200
Egypt	12,395
Plates and sheets from:	
Belgium	9,386
Germany	1,870
Worked from:	
Belgium	202
France	460
Germany	976
England	175

Amounting in value to 183,055 Italian lire, or in American currency to $35,329.62.

AMERICAN LEAD AND ZINC.

No American lead or zinc is consumed within this consular district; but the very best method of introducing and helping to place American goods of the foregoing or any other description upon this market, would be (as I have often recommended) sending out duly authorized agents to act for the manufacturers, so that their agents could enter into competition with the agents of manufacturers from other countries.

WILLIAM T. RICE,
Consul.

LEGHORN, *December 3, 1890.*

LOMBARDY.

ZINC MINES OF LOMBARDY.

The zinc mines in Lombardy, 9 in number, lie exclusively in a mountainous zone, about 30 kilometers in extent from Piazza, in Valle Brembana, to Presolana, in Valle Scalve. In this zone the calaminiferous emanations are found scattered in irregular heaps over a surface a kilometer in width.

DEPTH OF MINES.

Until a few years ago the excavation of the ore was made almost only at the surface; of late years, as the superficial layers were going to be exhausted, subterranean works were begun, which in several cases gave fair and hopeful results; there were several galleries pushed as far as 200 meters inside.

METAL IN ORES.

The richness in metal of the Lombardy calamines in a raw state, with such as are extracted from the layers, has gone on diminishing in late years; it was, for a long period, from 40 to 41 per cent, and has lately fallen down to 33 and 35 per cent.

METAL OBTAINED BY SMELTING.

In Lombardy the mineral is not cast, but only calcined. The calcination allows of a portion of heterogeneous substances being eliminated; thus the mineral is enriched, reaching a richness in metal of 60 per cent. The operation of calcination is done especially at the Ponte de Nazza, in the Valle of Seriana, and at Ponte Secco, in Valle Brembana. The calcinated mineral is exported, chiefly to England, to be smelted. There are no zinc foundries.

VALUE OF ORE AND SPELTER.

The price per ton of ore or mineral varies of course according to the different mines, the excavations in some being more expensive than in others. In the more important mine, the calamine is contracted for on the basis of 20 lire to 30 per ton for choice mineral on the piazzale of the mine.

There being no foundries of zinc in Lombardy, no price can be quoted for the metal.

IMPORTS AND EXPORTS OF ORE.

The produce of calcinated calamine has averaged of recent years about 9,000 tons. As there is no production of pure metal, the supply for home consumption is provided for by importation.

STATUS OF PRODUCTION.

As I have already stated, there is no metalic zinc in Lombardy, consequently there can be neither increase nor diminution. There is a sligh increase in the ore.

WAGES OF MINERS.

The wages of miners can not be exactly given; it is estimated that they receive about 40 cents per day.

FOREIGN LEAD AND ZINC.

Zinc is imported especially from Belgium. The importation to Italy in the five years 1885 to 1889 averaged, both in wrought and unwrought metal, 50,000 quintals. In proportion to the population, Lombardy should have consumed about 5,000 quintals, but the facts are that the consumption was not more than 1,000 quintals.

AMERICAN LEAD AND ZINC.

The American must form his own judgment as to the best means and the cheapest mode and cost of transportation and whether he can compete with Belgium in regard to quality and price. There are only two lead mines in Lombardy, which are very poor, only yielding a few hundred tons annually. In 1888 the yield was 366 tons. The most correct information in regard to the production of zinc and lead in Italy can be secured in the mining districts of Sardinia.

GEO. W. PEPPER,
Consul.

MILAN, *November 13, 1890.*

MARSALA.

The small quantities of lead and zinc used here are either imported direct from England or brought here from Genoa, the lead chiefly in ingots and gas and water pipes. The quantity is very small, the gas company being the chief importers; the zinc comes in sheets and is principally used for pans of water-drawing machines.

No American lead or zinc has ever come here direct by sea, and as the consumption of these metals is so small I don't think there is any likelihood of opening up trade in them.

THOMAS STEELE,
Acting Consular Agent.

MARSALA, *September 13, 1890.*

MESSINA.

Neither lead nor zinc is mined in this district.

The statistics for the year 1888, as published by the Messina Chamber of Commerce, show the importations of foreign lead and zinc for that year into this district to have been as follows:

Lead (pigs of lead and scraps): From Germany, 10,000 kilos; from England, 8,638; from Malta, 18,491; total, 37,129 kilos, valued at 11,881 francs; duty on same 185.64 francs.

Lead (sheet and pipe): From France, 255 kilos; from England, 466; from Switzerland, 52; from Belgium, 28; total, 801 kilos, valued at 311 francs; duty on same, 38.77 francs.

Zinc (plates and sheets): From France, 1,597 kilos; from Germany, 6,670; from Holland, 31,281; from Belgium, 21,350; total, 60,898 kilos, valued at 32,276 francs; duty on same, 961.04 francs.

Zinc (plain articles of): From Austria, 833 kilos; from France, 128; from Germany, 175; from Belgium, 443; total, 1,579 kilos, valued at 2,447 francs; duty on same, 192.21 francs.

As will be seen, the imports of lead and zinc into Messina are insignificant.

American lead and zinc and their manufactures are not consumed in this district. The best means of introducing American lead and zinc would be to send samples to a reliable agent. Consumers are willing to pay for quality.

Belgium sheet zinc is superior in quality to other foreign zincs that are imported into Messina.

WALLACE S. JONES,
Consul.

MESSINA, *September 18, 1890.*

NAPLES.

There are no mines of either metal in my consular district, therefore I am unable to comply with the instruction.

FOREIGN LEAD AND ZINC.

In regard, however, to the importation of foreign lead and zinc into Naples and the consumption thereof, I can report that large quantities of lead are mined in Sardinia and shipped to Spezia to the Continental Lead and Iron Works, from whence, after it has been refined and molded into bars and otherwise prepared for market, it is transferred to the trade throughout Italy. No lead is imported from abroad. Zinc is brought in great quantity from Antwerp, Rotterdam, and Amsterdam. No American zinc is used in Naples, but sheet zinc of European manufacture is largely consumed here.

The zinc mines of Sardinia are very productive, and the ore is exported to Rotterdam and Antwerp, where it is refined and rolled, and then returned to Italy prepared for the purposes for which it is required. Zinc marked in sheets finds ready sale in this neighborhood, and prices range between 75 and 80 lires per 100 kilograms. No American zinc has been imported up to this time into Naples.

The freight from Belgium and Holland to this place is 20 shillings per ton.

AMERICAN LEAD AND ZINC.

If American sheet zinc could be sold at a price lower or to compete with that brought from Belgium or Holland, a market could be found here for it, and a large and profitable business established.

The way to introduce lead and zinc of American product and manufacture would be to find a reliable and energetic business man in this city, and get a low rate of freight from New York or wherever shipped, and continue the consignments to him until they (the metals) become known and popular.

JNO. STEEL TWELLS,
Consul.

NAPLES, *October 1, 1890.*

PALERMO.

Statement showing the quantity of lead and zinc imported into the port of Palermo during the five years ending December 31, 1889.

Countries.	Lead.	Zinc.
	Kilograms.	*Kilograms.**
Austria-Hungary	1,102	20,208
Belgium	20,132	9,373
France	71,876	16,831
Germany	8,572	43,764
Great Britain	39,949	240,434
Holland	.....	191,254
Malta	742	.....
Russia	.....	40
Spain	15,589	.....
Switzerland	1,394	30
Total	159,356	521,934
Customs duty collected thereon	$800.36	$5,202.55

* The kilogram = 2·205 pounds.

Statement showing the quantity and forms of lead, together with their respective values, imported into the port of Palermo during the five years ending December 31, 1889.

Years.	Lead in pigs.		Lead in plates.		Lead articles.		Total importation.	
	Quantity.	Value.	Quantity.	Value	Quantity.	Value.	Quantity.	Value.
	Kilograms.		*Kilograms.*		*Kilograms.*		*Kilograms.*	
1885	2,182	$131.00	18,861	$1,282.60	3,154	$2,411.40	24,197	$3,825.00
1886	2,505	150.20	15,173	1,031.60	4,146	2,163.20	21,824	3,345.00
1887	3,616	238.60	17,134	1,267.80	4,105	2,136.60	24,855	3,643.00
1888	5,928	379.20	12,521	901.80	336	173.60	18,785	1,454.60
1889	62,991	4,409.20	3,902	304.20	2,802	1,670.00	69,695	6,383.40
Total	77,222	5,308.20	67,591	4,788.00	14,543	8,554.80	159,356	18,651.00

Statement showing the quantity and forms of zinc, together with their respective values, imported into the port of Palermo during the five years ending December 31, 1889.

Years.	Zinc in pigs.		Zinc in plates.		Zinc articles.		Total importation.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Kilograms.		*Kilograms.*		*Kilograms.*		*Kilograms.*	
1885	1,469	$108.80	104,716	$11,518.80	5,146	1,638.20	111,331	$13,265.80
1886	215	15.40	84,761	9,554.00	8,308	2,496.80	93,284	12,066.20
1887	.....	.....	92,308	9,230.80	4,940	1,498.40	97,248	10,729.20
1888	.....	.....	88,971	9,430.80	14,639	6,677.60	103,610	16,108.40
1889	843	75.80	104,292	11,680.60	11,326	2,810.60	116,461	14,567.00
Total	2,527	200.00	475,048	51,415.00	44,359	15,121.60	521,934	66,736.60

PHILIP CARROLL,
Consul.

PALERMO, *September 27, 1890.*

PORTUGAL.

(1) Depth of lead mines varies from surface to 200 meters, the greatest depth thus far known to have been worked in Portugal. There are no zinc mines in Portugal that are now worked or known to have been worked.

(2) Lead in ore: before dressed, 12; after dressing, 60 to 70 per cent.

(3) No smelting is done here now; some three years ago it was attempted, but afterwards abandoned on account of not being profitable.

(6, 7) Ore from 60 to 70 per cent worth £6 per ton. No spelter ore is reduced.

(8) All is exported; mainly to England.

(9) The production of ores is considerably decreasing.

(10) Wages of miners, 400 to 500 reis per diem, (50 to 54 cents) each shift being usually of eight hours. Miners find themselves.

(11) Foreign lead and zinc are used in Portugal, and in all the forms and applications usually employed in civilized countries.

(12) No articles of lead and zinc of American manufacture are consumed in Portugal. Our prices are too high. The only way of introducing any trade or manufactures into Portugal is to compete in prices with England, France, and Germany and to conform to the usage here of granting credit and encouragement to trade, which American dealers and manufacturers are seldom disposed to extend.

GEO. S. BATCHELLER,
Consul-General.

LISBON, *April 13, 1891.*

RUSSIA.

LEAD PRODUCTION OF RUSSIA.

Lead in Russia is almost exclusively received in the form of a biproduct, attained through the process of melting silver-lead ore at the silver-melting factories, and therefore this metal is principally produced in the Altaï districts.

In the shape of a uniform product, lead was received only at one factory in Turkestan, built by a Russian merchant, N. I. Ivanow; but in 1886 this factory was obliged to stop work, because the local authorities forbade them longer to fell the trees necessary to obtain the requisite fuel, giving as a reason that the destruction of the forests favored ruinous inundations by the rivers.

The total amount of lead produced in Russia during the year 1887 amounted to 1,088 tons, and was produced in the following places:

	Tons.
Altaï district	560
Nertchinsk district	151
Alagviak (in the Caucasus)	172
Khirghise Steppes	205

During the last ten years the production of lead in Russia has varied as follows:

Table No. 1.

	Tons.		Tons.
1878	1,535	1884	695
1879	4,491	1885	786
1880	1,259	1886	854
1881	1,084	1887	1,082
1882	629		
1883	597	Average	1,001

It is seen from the above table that the production of lead, which had gradually fallen, together with the production of silver, until the year 1883, has since steadily increased, so that during the year 1887 27·3 per cent, or 234 tons more of this metal were obtained than in the preceding year, and 8·6 per cent more than the average for the last ten years.

1. *Smelting of silver and lead.*

Names of works.	Water wheels.		Steam engines.		Furnaces in activity.			Ore smelted.	Lead received.
	No.	Power.	No.	Power.	Shaft.	Refining.	Mining.		
His Majesty's cabinet.									
Province of Tomsk (Altaï district):								*Tons.*	*Tons.*
Barnaoulsky	4	33	2	30	11	2	2	3,355	245
Pavlovsky	4	28	1	10	19	3	2	4,188	.....
Loktevsky	7	85	.....	.....	7	1	1	3,050	84
Zmievsky	4	160	.....	.....	12	2	2	3,779	233
Gavrilovsky	2	40	1	25	8	2	1	8,952	.....
Souzounsky	5	34	.....	.....	5	1	1	1,266	.....
Trans-Baïkal:									
Koutomarsky (Nertchinsk district)	2	11	.....	.....	6	3	3	1,379	150
To the state.									
Alagirsky (Tersk district)	2	18	.....	.....	2	1	.....	965	172
Private.									
Tzarevo-Alexcan Province, belonging to M. Popow	.....	.....	1	4	.....	4	.....	7,337	204
Total	.....	.....	.....	.....	.....	.....	.....	28,281	1,088

RUSSIAN ZINC INDUSTRY.

The entire zinc industry of Russia is confined to the Kingdom of Poland where 4 factories are at work in the province of Petrokow, namely, the Bendinsky, belonging to the state; the Pawline, engaged in melt-

ing zinc ore from the mines of Olkonshky and other mines in the provinces of Kieletz and Petrokow; the works of Slavkovsky, also belonging to the state; and the Emma works, the latter producing sheet zinc from the ore. Besides these, zinc white lead is prepared at Sosnovitsky works.

The total amount of zinc ore smelted in 1887 was 43,499 tons, from which 3,983 tons of zinc were obtained, and of which the Pawline factory produced 2,353 tons and the Bendinsky 1,630 tons.

For the last ten years the production of zinc metal in Russia has varied as follows:

Table No. 2.

	Tons.		Tons.
1878	5,101	1884	4,745
1879	4,749	1885	5,039
1880	4,870	1886	4,610
1881	4,998	1887	3,983
1882	4,910		
1883	4,029	Average	4,603

Thus in 1887 the production of zinc decreased almost 13·6 per cent as compared with the preceding year. The smelting of zinc at the Pawline works decreased 813 tons, and at the Government works of Bendinski it increased 185 tons. During the year 1887 3,469 tons of zinc were rolled into sheets, which, compared with the quantity rolled in the preceding year, shows a decrease of 61 tons. About 814 tons of zinc metal were required to produce 898 tons of white lead.

While it is true that the production of zinc in Russia has decreased, it must also be stated that the import of this metal has also diminished, the imports of zinc in 1886 amounting to 2,902, and in 1887 amounting only to 864 tons.

I regret to say that I have not been able to obtain any official data relative to the general depth of lead and zinc mining at present as compared with mining in the past, except that the veins are now much deeper than in former years.

Both zinc and lead are found in very small quantities in Russia, and in insufficient quantities to supply the home demand. The production of zinc ore has gradually decreased, whereas the product of lead has increased since 1883.

I regret to say that the mining department has not been able to supply me with answers to some of the questions propounded in the Department's circular; but such data as I have been able to obtain of a reliable character I have embodied in this report.

In examining the custom-house records of 1890, up to September 1, I find that the imports both of zinc and lead have somewhat increased as compared with the imports of the two preceding years.

FOREIGN LEAD AND ZINC IN RUSSIA.

The following table will show the quantity of zinc and lead imported into Russia, as well as the forms in which they are imported:

Description.	1890.	1889.	1888.
	Quantity.	Quantity.	Quantity.
	Tons.	*Tons.*	*Tons.*
Lead in bars and pieces	29	24	22
Lead in sheets and piping	5	5	4
Zinc or spelter in pieces	7	4	1
Zinc in sheets	* 828	* 972	* 824

* Poods.

Thus the imports of lead during the first nine months of 1890, were 34 tons as against 29 tons in 1889, and 26 tons in 1888; and for zinc the imports were 8 tons in 1890, as against 5 tons in 1889, and 1¼ tons in 1888.

As may be seen in the accompanying tables, both zinc and lead are consumed to a considerable extent and in the forms of sheets and piping, but is impossible to state what proportion of these metals are of American manufacture.

MINES IN OPERATION.

Mines worked.	Number of galleries worked.	Steam engines.		Number of hands employed.		Ore extracted.	Quantity of ore washed.	Rich ore obtained.
		No.	Power.	Miners.	Laborers.			
POLAND.								
Mines belonging to the state.								
						Tons.	*Tons.*	*Tons.*
Province of Kielets:								
Joseph, and the Olkouschkaia factory attached to it	40	.....	.....	48	24	3,166	.....	.....
				2	2	.....	1,930	693
Uliss, and the Boukovsky factory attached to it				95	30	12,631	.....	.....
				2	2	.....	5,663	3,049
George, and the Startchinovsky factory attached to it				56	39	10,027	.....	.....
				4	6	.....	4,177	2,606
Private.								
Province of Kielets:								
Kouklinky, belonging to Von Kramst Company	.....	1	12	245	97	15,567	.....	.....
Province of Petrovsk, belonging to the heirs of A. Wolf:								
Nicholas	1	.....	.....	2	2	1	.....	.....
Constantine	1	.....	.....	4	5	2	.....	.....
Emmanuel	1	.....	.....	4	3	116	.....	.....
Total in Poland	44	1	12	462	220	41,510	11,770	6,438
Caucasus, province of Koutais:								
Tsafrakidi	2	.....	.....	12	4	83	.....	.....
Total	46	1	12	474	224	41,593	11,770	6,438

Lead and zinc factories in operation.

Factories working.	Furnaces.		Water wheels.		Steam engines.		Number of rollers.	Number of workmen employed.		Amount of ore smelted.	Zinc received.	Number of sheets rolled.	Quantity of white lead received.	
	Melting.	Heating.	Number.	Force.	Number.	Force.		Miners.	Laborers.				Zinc required.	Lead obtained.
POLAND.														
Works belonging to the state.														
Province of Petrovsk:										*Tons.*	*Tons.*		*Tons.*	*Tons.*
Bendinsky Works.	46	....	....	....	....	....	....	156	80	19,606	1,626	.....	.....	.....
Province of Kielets:														
Slavkotsky Rolling Mills	3	2	2	80	....	....	3	17	29	.....	.....	10,000	.....	.....
Total belonging to the state	49	2	2	80	....	....	3	173	59	19,606	1,626	10,000	.....	.....
Private.														
Province of Petrovsk (belonging to von Kramat's Mining Industry Co.):														
Pawline Zinc Works	20	10	....	....	3	24	....	60	140	23,893	2,357	.....	.....	.....
Emma Rolling Mills	....	2	....	....	1	120	2	24	38	.....	.....	182,735	.....	.....
Zinc white-lead factory at Sosnovits	....	2	....	....	1	8	....	4	24	.....	.....	.....	814	898
Total belonging to private	20	14	....	....	5	152	2	88	202	23,893	2,357	182,735	814	898
Total for Poland.	69	16	2	80	5	152	5	261	261	43,499	3,983	192,735	814	898

AMERICAN LEAD AND ZINC.

Most certainly American dealers in lead and zinc should be able to introduce their goods into Russia and do a large and profitable business in this line. In general I may say that unless samples of goods can be sent here with some enterprising agent who will be able to produce guaranties of good faith and financial ability to carry out contracts, the introduction of goods here would be attended with many difficulties. It is with pleasure that I am able to recommend the following-named firms interested in these industries in Russia: Messrs. Gregory S. Rasteraieff, Ivan S. Rasteraieff, St. Petersburg; Nicholas S. Rasteraieff, N. I. Koltchin, A. Nossenkoff, Moscow; Pastoukhoff Brothers and Mr. A. Bielaieff, Yaroslaw.

These people are said to be reliable and to be desirous of aiding in the introduction of lead and zinc from the United States to this country to the benefit of the parties concerned.

J. M. CRAWFORD,
Consul-General.

ST. PETERSBURG, *November 20, 1890.*

BATOUM.

There is no lead or zinc mining in this consular district, and the only foreign lead or zinc used here is in the shape of solder for petroleum cans. The amount of solder imported in 1890 was 921 tons, and it came from England. The best manner of introducing American lead or zinc into this country would be through English agencies.

JAMES C. CHAMBERS,
Consul.

BATOUM, *February 16, 1891.*

FINLAND.

There are no lead or zinc mines in this country, and I am therefore unable to answer the various interrogatories relating to this subject.

FOREIGN LEAD AND ZINC.

A considerable quantity of lead and zinc is consumed in this country, the lead imported from England mostly in the form of ingots, and the zinc mostly from England and Belgium in the form of plates, which are chiefly used for roofing and in the manufacture of various utensils.

AMERICAN LEAD AND ZINC.

Lead and zinc have not, to my knowledge, been imported from the United States, and the best manner of introducing them here would be for manufacturers to send samples to me, stating price, freight, and other conditions, delivered free here, when I would use my best endeavors to promote business.

The communication between the United States and this country is carried on at present by the Wilson Line from New York and Boston to Hull, and thence here direct by Finnish steamers.

HERMAN DONNER,
Vice and Acting Consul.

HELSINGFORS, *September 19, 1890.*

POLAND.

DEPTH OF MINES.

Formerly the ores (galman) were extracted in the mines of Olkusz in the Government of Kielce, Kingdom of Poland, at a depth of 40 sagenes* (280 feet), and in the mines of Boleslawice, in the same locality, at a

* 1 sagene = 84 inches.

depth of 18 sagenes (126 feet). At present the extraction of ores takes place in the first-named mines only at a depth of 15 sagenes (105 feet), though much deeper digging is now intended, and in the second-named mines the depth of diggings remains the same as formerly.

METAL OBTAINED.

Average per centum of metal in the ores, 2 to 12 per cent.

Average per centum of metal obtained by smelting process, 3 to 8 per cent.

PROCESS OF SMELTING AND COSTS.

The process preferred in the smelting of ores is the Silesian system.

The cost of reducing 2,000 bodias* of ore into spelter amounts to about 5,000 rubles† in the smelting houses belonging to the government.

The cost of extraction of 1 bodia of ore (galman) amounts to 85 kopeks (52 cents).

VALUE OF SPELTER.

The average value of spelter depends on the state of the market. At present the price of 1 pood of spelter is 3.50 rubles.

STATUS OF PRODUCTION.

At present all the zinc and lead ores extracted are smelted on the spot, and the metal obtained is employed for local use or is sent to the interior of the Russian Empire, especially tin.

The extraction of lead ores is now very small, only in so far as it is found with galman, but the extraction of galman is also diminishing.

WAGES OF MINERS.

A miner receives for the extraction of one bodia of ore, about 50 kopecks (34 cents); from this pay is deducted the cost of dynamite, as also the aid of other workmen if employed.

FOREIGN LEAD AND ZINC.

Lead and zinc are imported from abroad in quantities which vary, principally from Silesia, in Germany. According to official returns, in 1888 the import of lead into the Kingdom of Poland amounted to 111,839 poods, and of zinc to 38,232 poods.

* The bodia is about 5 square feet and weighs about 13 poods, 1 pood being equal to 36·112 English pounds.

† The silver rouble=68 cents in 1890.

AMERICAN LEAD AND ZINC.

American lead and zinc are not introduced into the Kingdom of Poland as far as can be ascertained. They can be imported if they prove to be of better quality and cheaper than the metal now in the market.

JOSEPH RAWICZ,
Consul.

WARSAW, *November 4, 1890.*

SPAIN.

THE MINES OF HUELVA.

The province of Huelva is said to be the richest mining district in Spain. It produces in a territory of 10,065 kilometers minerals of nearly every description (see inclosure No. 1), but principally copper.

The population according to the last census was 210,447. Of this number 15,500 reside at the capital, which bears the same name as the province. Fifty-one per cent of the inhabitants are males.

In the province there are 3 cities, 75 villas, 50 aldeas, and 2,303 country houses.

Although the wealth of the province centers in its mines, the chief of which is the Rio Tinto, with an invested capital of $75,000,000, it is also rich in agricultural products.

A Spanish city generally has a population of at least 10,000 unless it be the capital of a province. Villas are smaller than cities but have an independent jurisdiction. Aldeas are the smallest villages and are under the jurisdiction of the nearest villa or city.

ANCIENT MINING IN HUELVA.

The mines of Huelva have been worked for ages. The records of their first exploitations are lost in mythology. It is recorded that the Phenicians embarked for Huelva in obedience to the gods, that the Guadelete was the river Lethe, and the surrounding country the Elysian fields of Homer.

It is also stated that the mines of Huelva were worked before the deluge, long before the strait of Gibraltar separated Europe from Africa.

The Bible eulogizes the gold of Tharsis and during the reign of Solomon the mines of this province were industriously worked and their output carried to Asia to ornament the famous temple of the Jews.

The Iberian peninsula was to the ancients the western extremity of earth and to it, according to Aristotle, went the Phenicians searching for the land described by Homer and for the treasures that Solomon desired.

They were the first to discover the bay of Cadiz, he says, and received from the natives of the country, as the price of the oil they brought, so much silver that they could not carry it all away. In order to take as much as possible they gave away all their utensils and made silver ones to replace them, even going so far as to make silver anchors for their vessels.

In the mines have been found many of the tools of these early workers, and an abundance of other evidence to prove that the opulence of the Phenicians was largely due to the mines of Andalusia.

The wealth of this favored land in time attracted the avarice of Rome, and she disputed with Carthage for its possession. In the year 45 B. C. she secured it and greatly developed its mines.

Even to-day the visitor is astonished by the extent of country the Roman miners covered, and by the plentiful remains that testify to the genius and grandeur of their undertakings. The diversity of their labors is attested by the numerous Roman articles of iron, lead, copper, glass, and earthenware that are found in abundance in the mining regions of Andalusia. In one of the mines of Huelva, known by the name of Nerva and situated on the southern slope of the hill Solomon, was found in July, 1772, at a depth of 16½ meters, a copper slab, which proves that these mines were in charge of the Procurator Pudente during the reign of the Emperor Nerva. Upon it was this inscription:

IMP. NERVÆ. CÆSARI AG
PONTIFI. MAXIMO. TR.
POTEST. P. P. COS III
AVG. IIII. PVDENS. AVG. LIB
PROCVRATOR.
SVO. POSVIT.

There is little evidence to show that the Goths or Moors utilized the riches of the mines. There is in the province about 4,000,000 cubic meters of ancient slag. Each cubic meter of this residue represents 1½ cubic meters of melted pyrities, or, in round numbers, 6,000,000 cubic meters, equaling in weight 30,000,000 tons. This amount as refined by the Phenicians and Romans would produce 1,200,000 tons of copper metal. This represents the product of the two nations, the share of the Romans being about seven-tenths of the whole.

Total products of different epochs are shown in the following statement:

No. 4.—*Production of pyrites in the mines of the province of Huelva, since their opening till the year 1888, inclusive.*

Mines.	Epoch of the working.	Metric tons.	Remarks.
Ancient product	Ancient	30,000,000	All the mines of the province were worked more or less by the Phenecian or Roman miners.
Rio-Tinto	Eighteenth century.	221,637	The mines were improved.
Do	Nineteenth century.	15,081,599	A part of the ores were exported and a great part improved in the district.
Tharsis	....do	8,719,246	Do.
La Zarza	....do	1,244,810	Do.
Cueva de la Mora	....do	813,283	The greater part was improved in the district by the system of cementation.
San Telmo	....do	472,200	Improved in the district.
El Lagunazo	....do	461,303	Do.
La Paderosa	....do	406,224	A part of this was exported.
Sotiel Coronada	....do	363,208	Do.
La Peña del Hierro	....do	256,393	Do.
El Buitron	....do	225,922	Exported.
El Carpio	....do	223,745	Improved in the district.
La Lapilla	....do	135,500	Exported.
Las Cabezas de los Pastos	....do	123,430	Do.
San Miguel	....do	111,676	Improved in the district.
La Concepcion	....do	105,480	Do.
La Joya	....do	91,301	Do.
La Chaparrita	....do	69,843	Do.
El Tinto	....do	40,000	Do.
La Corte	....do	27,303	Exported.
Barranco de Trimpancho	....do	16,324	Do.
Poyatos	....do	10,397	Improved in the district.
El Lomero	....do	2,575	Do.
Sierra del Venero (Cala.)	....do	1,711	Improved by foundry.
La Romanera	....do	1,046	Exported.
Vulcano	....do	1,000	Improved in the district.
Herrerias de los Confesonarios	....do	177,100	Exported.
Total		59,404,256	

Pliny says that 20,000 slaves were employed in these mines, and that at times the Roman army took part in their development.

According to published statistics of the minister of foment there existed in all Spain in 1886 16,480 concessions of mineral lands, covering a surface of 467,185 hectares. The rental of these lands should have brought to the Spanish Government a total rent of 1,689,549 pesetas.* Of the 16,480 concessions only 2,080 were productive; they covered a surface of 236,730 hectares and produced altogether 8,644,276 tons of minerals, valued at 82,814,416 pesetas. On such productions the Government collects a revenue of 1 per cent; consequently from the rental of the mineral lands and from this percentage of their production the Government should have obtained in round numbers two and a half million pesetas; but as the amount collected was 889,000 pesetas short of this sum, the commission of mineral statistics canceled concessions aggregating over 100,000 hectares of surface.

* The peseta=19.3 cents.

The declared value of mineral products was found by this commission to be too low and the true value was established by it as the basis for collecting the Government's percentage.

Description.	1887.	1888.
Mineral products:	*Pesetas.*	*Pesetas.*
Value established by commission	128,372,948	125,825,144
Value declared by producers	78,028,055	81,385,825
Difference	42,344,893	44,439,319
Metallurgical products:		
Value established by commission	157,830,370	186,024,493
Value declared by producers	96,740,286	140,917,602
Difference	61,090,084	45,106,891

The concessions canceled were with one or two exceptions nonproductive, hence this action of the commission did not affect the mineral product of the country.

The number of laborers decreased in the mines, but the use of machinery increased. The employés at smelters and other works increased 4,200, and the quantity of ores smelted increased 975,650 tons. The horse power of the machinery employed at mines and smelters, etc., passed from 29,723 in 1886 to 37,465 in 1888, and the employés decreased from 76,451 in 1886 to 71,620 in 1888, this decrease occurring in the mines, for, as stated above, the number employed at smelters, etc., increased. During the same period the product of the mines rose from 8,173,155 tons in 1886 to 9,391,127 tons in 1888, and the amount of ores smelted from 2,484,270 tons to 3,459,920.

In 1887 the production of iron ore reached 6,796,266 tons, and although it decreased in 1888 it still exceeded 1886 by 442,930 tons. The increase in copper minerals was 826,035 tons over 1886.

The production of lead ores decreased in 1887, but in 1888 showed an increase of 14,345 tons over 1886.

In 1888 argentiferous ores increased 160,195 tons over 1886.

In 1888 the production of coal passed all previous records, reaching the sum of 1,014,720 tons, but this increase was not sufficient to prevent the importation of 2,000,000 tons additional for home consumption.

The production of wrought and sheet iron, etc., passed from 57,728 tons in 1886 to 253,142 in 1887 and to 213,578 in 1888.

The production of steel during the same time was 20,261 tons in 1886, 35,492 tons in 1887, and 28,645 tons in 1888.

It is thought that the time is close at hand when the works at Vizcaya and Asturias will be able to fully supply the Spanish market.

The value of the steel importations decreased 2,006,728 pesetas.

The production of quicksilver remains stationary, while lead and copper show an increase of 30,000 tons over 1886, with a corresponding decrease in the exportation of their ores.

It is clearly evident that the mineral industries of Spain were at the time this official data was gathered in a very healthy condition, and from private sources of information there is every reason for stating that since then the output has largely increased. Within the last six months there have been heavy investments of English capital in Spanish mines. In each and every instance these investments have electrified semidormant industries and communities.

No. 14.—*Number of laborers employed at the different works of the Rio Tinto mines during the first quarter of the year 1888.*

	Men.	Women.	Children.	Total.
Working of mines:				
Mine of Nerva—				
Open-air working	579	38	149	766
Subterranean working	694	16	69	779
Mine of San Dionisio	865	16	66	947
Mine of Norte	480	11	36	527
Workings of minerals:				
By cementation:				
Calcination	280	48	94	422
Terraces of Nerva and La Cerda	537	10	79	626
Department of Naya	212	5	14	231
Department of Los Planes, washing the mineral raw	110	2	11	123
By fusion:				
Calcination of minerals for melting	95	23	50	168
Foundries	352	10	43	405
Transportation through the mine	182	.....	1	183
Conservation of the mine	73	.....	5	78
Stables and stores	146	5	10	161
Houses and mountains	118	2	38	158
Pump services	85	.....	4	89
Laboratory	9	1	4	14
Workshops of the mines	485	1	48	534
Miscellaneous	130	8	4	142
Total	5,432	196	725	6,353

There are also the laborers employed for transportation from the mine to Huelva, loading and unloading at the wharf, keeping the railroad workshops, stores, etc., amounting altogether to 800, therefore adding it to the above total will give a grand total of 7,153 laborers.

No. 15.—*Comparative statement in weight and values of the production, exportation, and importation of minerals, metals, and other similar substances during the year 1888.*

Description.	Production.		Exportation.		Importation.	
	Weight.	Value.	Weight.	Value.	Weight.	Value.
Minerals.	*Tons.*	*Pesetas.*	*Tons.*	*Pesetas.*	*Tons.*	*Pesetas.*
Iron	5,609,876	16,829,628	4,464,385	44,643,845	.....	.....
Lead	356,545	39,219,950	2,168	547,311	.....	.....
Lead containing silver	183,441	27,516,150	8,825	4,853,531	.....	.....
Silver	134	38,782	.....	.....	.....	.....
Copper	3,202,416	19,214,496	825,046	33,001,802	.....	.....
Tin	115	90,133	.....	.....	7,906	1,581,317
Zinc	74,353	1,912,178	32,004	997,065	.....	.....
Quicksilver	27,847	5,915,238	.....	.....	.....	.....
Antimony	440	21,548	367	109,987	.....	.....
Cobalt	68	27,384	.....	.....	.....	.....
Manganese	2,807	72,982	2,387	119,350	.....	.....
Salt (common)	413,886	7,243,050	235,182	3,527,735	815	16,302
Sulphate of soda	177	2,336	.....	.....	.....	.....
Protoxide of barium	5,535	57,917	.....	.....	.....	.....
Sulphate of lime	.....	.....	546	10,924	249	9,972
Alkaline sulphate	160	9,600	.....	.....	.....	.....
Sulphur	132,880	391,700	.....	.....	.....	.....
Phosphorus	4,532	15,852	2,802	28,020	.....	.....
Silicates of magnesia	738	12,008	257	51	.....	.....
Kaolin	490	17,174	.....	.....	.....	.....
Alumine	5,379	1,068	.....	.....	.....	.....
Fluor spar	5	478	.....	.....	.....	.....
Topaz	*280	2,038	.....	.....	.....	.....
Mineral coal and coke	1,225,173	12,130,946	3,419	71,796	1,988,444	31,275,357
Graphite or black lead	36	1,596	.....	.....	.....	.....
Asphaltum	150	1,500	.....	.....	.....	.....
Metals and other metallurgical products.						
Cast and wrought iron and steel	252,116	36,304,640	96,801	7,328,877	57,631	8,033,850
Lead	161,462	48,438,600	58,957	19,479,598	.....	.....
Lead containing silver	73,376	32,285,440	70,636	24,722,903	.....	.....
Silver	65	11,608,755	23	4,443,834	†588	9,996
Copper	70,719	50,447,089	45,080	27,850,086	1,029	2,334,237
Tin	4	2,700	6	16,640	466	1,165,260
Zinc	26,173	3,925,592	1,089	511,866	408	346,099
Quicksilver	1,865	10,007,165	1,104	6,021,611	.....	.....
Sulphate of soda	22	2,160	.....	.....	.....	.....
Alum	233	28,224	.....	.....	1,542	246,821
Sulphur	5,054	507,321	185	22,290	6,600	858,121
Orpin	50	20,028	.....	.....	.....	.....
Asphaltum	23	892	.....	.....	.....	.....
Hydraulic cement	31,538	487,475	2,166	64,982	.....	.....
Jet	.....	.....	35	2,683	.....	.....

* Kilograms. † Hectograms.

No. 16.—*Production of minerals, 1886, 1887, and 1888.*

Description.	1886.		1887.		1888.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	*Pesetas.*	*Tons.*	*Pesetas.*	*Tons.*	*Pesetas.*
Iron	4,166,946	14,247,509	6,796,266	20,524,725	5,609,876	16,829,628
Lead	242,200	42,781,037	335,624	35,252,940	356,545	39,219,950
Lead containing silver	23,246	4,685,786	147,794	22,421,817	183,441	27,516,150
Silver	1,531	188,263	185	60,977	134	38,782
Copper	2,376,384	26,367,177	3,054,901	18,329,406	3,202,416	19,214,496
Copper containing silver	51	320				
Tin			5	3,633	115	90,133
Zinc	39,810	1,145,929	69,012	1,788,502	74,353	1,912,178
Quicksilver	25,286	6,163,266	26,422	5,738,279	27,847	5,915,238
Antimony	8	809	322	3,430	440	21,548
Cobalt	132	85,800	436	69,570	68	27,384
Manganese	400	7,275	1,460	37,412	2,807	72,982
Sulphate of soda	3,155	18,275	2,504	19,466	177	2,336
Protoxide of barium	13	39			5,620	58,808
Fluor spar	2,000	10,000			5	475
Phosphorus	11,839	118,390	21,963	66,331	4,532	15,852
Silicate of magnesia	100	1,000	199	2,179	738	12,008
Kaolin	946	28,940	1,049	26,236	490	17,174
Sulphur	45,669	1,866,590	48,050	554,785	132,880	391,700
Pit coal	977,559	8,186,674	1,021,254	8,430,280	1,014,720	8,303,235
Lignite	23,873	395,119	17,051	180,422	21,845	206,538
Graphite or black lead					36	1,595
Asphaltum	159	1,307	183	1,830	150	1,500

No. 17.—*Metallurgical products, 1886, 1887, and 1888.*

Description.	1886.		1887.		1888.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	*Pesetas.*	*Tons.*	*Pesetas.*	*Tons.*	*Pesetas.*
Cast and wrought iron	57,728	12,436,582	288,634	39,636,280	252,116	36,204,640
Steel	20,261	2,672,885				
Lead	94,895	25,053,114	119,932	27,214,576	161,462	48,438,600
Lead containing silver	11,047	4,128,140	67,773	26,880,175	73,376	32,285,440
Silver		9,635,055		21,874,535		11,603,755
Copper, fine	41,870	37,813,420	55,762	39,023,400	70,719	50,447,088
Zinc	4,327	2,377,028	11,476	3,607,112	26,173	3,925,592
Calamine calcined			17,103			
Quicksilver	1,846	8,301,533	1,949	9,438,723	1,865	10,007,165
Sulphuric arsenic (orpin)	77	32,802				
Salt (common.)	124,851	1,674,119	405,394	7,260,741	413,886	7,243,050
Sulphur	9,041	1,136,567	8,371	871,755	5,054	507,321
Alum	560	70,000	596	73,608	233	28,224
Coke			134,536	10,790,877	188,607	3,621,173
Asphaltum	117	5,300	164	6,572	22	892
Hydraulic cement	31,945	405,222	30,363	367,462	31,538	487,475
Sulphate of soda	325	32,500	53	5,790	32	2,160
Protoxide of barium	13	682	63	5,040		

No. 18.—*Résumé of Spanish mining.*

PROPERTY.

Year.	Mines.		Active smelters in manufactories.
	No.	Surface.	
		Hectares.	
1886	17,184	522,557	153
1887	15,321	496,709	147
1888	17,017	492,204	162

No. 18.—*Résumé of Spanish mining*—Continued.

FORCE EMPLOYED.

Year.	Human.			Mechanical.							
						Machines at smelters, etc.					
	Miners in mines.	Laborers in smelters, etc.	Total human force.	Number of steam engines at mines.	Total horse power.	Number of hydraulic machines.	Total horse power.	Number of steam engines.	Total horse power.	Total number of machines employed.	Total horse power.
1886	61,885	14,530	76,415	555	13,884	54	1,537	338	14,302	947	29,723
1887	51,110	14,895	66,005	511	14,125	54	1,423	347	15,531	912	31,079
1888	52,890	18,730	71,620	564	14,225	78	1,825	405	21,415	1,047	37,465

PRODUCTION.

Year.	Mines.	Value.	Smelters.		
			Ores smelted.	Metal produced.	Value.
	Tons.	*Pesetas.*	*Tons.*	*Tons.*	*Pesetas.*
1886	8,173,155	108,128,804	2,484,270	274,351	104,167,974
1887	8,685,157	78,461,497	1,783,659	629,668	103,311,862
1888	9,391,127	81,507,751	3,459,920	730,348	152,811,964

No. 19.—*Summary of the quantities and values of the principal minerals and their manufactured products imported into Spain and Balearic Isles during the first eight months of the years 1889 and 1890.*

Metals and their products.	Quantities imported.		Value of quantities imported.	
	1889.	1890.	1889.	1890.
	Kilos.	*Kilos.*	*Pesetas.*	*Pesetas.*
Iron ingots (cast)	17,635,018	22,607,972	1,284,451	1,582,558
tubes of all kind	4,599,192	6,270,978	689,878	940,647
common manufactures	2,734,262	4,023,515	656,222	965,643
fine manufactures	855,061	830,001	564,339	547,802
forged and steel bars	17,143,705	28,263,439	2,571,556	4,239,515
plates from 6 mm. thickness	2,145,876	2,664,116	429,175	532,823
plates 6 mm. thick, and bars	13,160,904	18,706,742	3,158,617	3,289,617
large pieces	1,065,240	6,086,535	319,572	1,825,959
wire	2,963,476	3,077,259	1,037,215	1,077,042
nails and screws	2,910,895	3,065,964	1,659,209	1,747,599
tubes	2,164,829	2,335,923	671,096	724,134
forged and steel goods	5,550,778	5,845,712	4,440,621	4,676,570
Tin plate	3,076,056	2,027,542	1,599,549	1,054,322
Copper (worked)	77,004	121,203	115,505	181,805
and brass bars and ingots	176,297	335,559	361,408	687,896
and brass sheets	373,274	964,260	858,530	2,217,797
and brass tubes	282,821	187,758	749,474	497,550
Bronze and brass manufactured	260,425	237,990	1,041,700	951,960
Tin ingots	329,764	360,904	824,412	902,260
Total			22,983,539	28,643,509

Summary of the quantities and value of the principal minerals and their cognates exported from Spain and Balearic Isles during the first eight months of the years 1889 and 1890.

Description.	Quantities exported.		Value of quantities exported.	
	1889.	1890.	1889.	1890.
Minerals and earthenware.				
			Pesetas.	*Pesetas.*
Coal ..... tons..	12,975	13,822	324,375	345,551
Tar, pitch, etc ..... kilos..	740,839	1,936,492	96,310	251,744
Sulphuret of lead ..... do....	429,457	674,682	111,658	175,395
with silver ..... do....	7,028,217	5,792,024	3,795,237	3,127,694
Other minerals of lead ..... do....	2,191,178	994,124	139,701	228,649
Blende ..... do....	6,008,570	11,088,510	138,179	255,035
Calamine stone ..... do....	17,096,700	26,644,510	564,191	813,966
The phosphorus ..... do....	7,860,064	.....	78,600	.....
Antimony ..... do....	221,770	416,285	66,531	124,886
Copper (mineral) ..... do....	578,075,544	447,613,259	22,554,667	17,014,303
	10,489,070	16,273,490	608,367	943,862
Iron (mineral) ..... do....	3,450,114,084	4,099,538,330	37,951,254	45,094,922
Pyrite of iron ..... do....	70,388,756	109,164,653	703,887	1,091,647
Manganese ..... do....	5,367,481	5,570,000	268,374	278,500
Small stones ..... do....	628,551	418,692	188,566	125,608
Tiles ..... do....	190,697	230,129	85,814	103,557
Stoneware ..... do....	84,187	86,477	67,349	69,181
Porcelain ..... do....	10,142	22,083	10,142	22,083
Total	.....	.....	67,753,202	70,066,585
Metals and their products.				
Gold bar and coin ..... hectograms..	472	492	84,320	152,520
jewels and table service ..... do....	54	42	27,000	21,000
Silver bar and coin ..... do....	461,449	204,552	3,536,808	3,778,212
jewels and table service ..... do....	3,981	720	111,468	20,160
Jewelers' waste ..... do....	22,570	6,513	338,550	97,695
Iron ingots (cast) ..... kilos..	52,097,869	53,495,014	4,087,830	4,279,601
forged and steel bars ..... do....	125,303	477,103	43,857	106,986
rails (old)	9,554,212	7,327,449	668,395	512,922
manufactured goods ..... do....	2,913,752	711,883	1,602,564	391,506
	21,040,416	27,106,485	16,832,333	22,220,879
Copper (old) ..... do....	1,361,408	28,086	2,042,111	42,129
bars ..... do....	1,718	4,800	3,521	9,840
sheets and nails ..... do....	27,875	37,291	78,838	98,821
Brass sheets ..... do....	9,538	23,366	21,937	53,742
Copper, brass, and bronze manufactured .do....	191,072	48,508	955,360	242,540
Quicksilver ..... do....	1,895,717	971,516	10,616,015	5,440,489
Lead, with silver ..... do....	47,020,329	56,782,071	17,397,522	21,009,366
without silver ..... do....	42,998,565	38,278,171	14,189,526	12,631,776
tubes ..... do....	15,410	6,036	6,935	2,615
manufactured goods ..... do....	443,431	236,947	168,503	90,039
Zinc, bars and sheets ..... do....	1,336,094	1,409,711	734,852	775,310
All other metals ..... do....	42,897	269,487	128,701	808,461
Total	.....	.....	78,671,946	72,846,612

R. W. TURNER,
Consul.

CADIZ, *October 29, 1890.*

BARCELONA.

LEAD AND ZINC MINES.

The provinces of Spain in which there are lead mines that are being worked are Jaen, Almeria, Cordova, Oviedo, Murcia, and Badajoz. In Lerida there are also mines that have lately been opened and that are supposed to be of importance, yielding of sulphate of lead ore, generally called galena. The mines in Jaen, Cordova, Oviedo, Murcia, and

Badajoz contain silver lead, of which 60 to 70 per cent is lead, and which contains from 200 to 300 ounces of silver per ton. The value of the ore per ton is from $20 to $30. The average per centum of metal in the ores is from 60 to 80. The average per centum of metal obtained by the smelting process is 99. The process preferred in the smelting of the ores is that resulting from the use of ordinary reverberatory furnaces. The principal zinc mines are in the province of Oviedo, in the north of Spain, and I might almost say the only zinc mines are there, for those in the province of Murcia, in the southeast of Spain, are of little account. As in the case of lead, the ordinary reverberatory furnaces are used in the treatment of the zinc ore. The average amount of metal obtained is 98½ per cent. The cost of the reduction of 2,000 pounds of ore into spelter is from $20 to $25, and the average value of spelter is $125 per ton. The average amount or per cent of metal in the ore is 40 per cent.

In this consular district, which comprises the provinces of Catalonia and Valencia and the Balearic Isles, there are no lead or zinc mines, and in the Balearic Isles there is practically no consumption of those metals. In the provinces of Catalonia and Valencia, on the other hand, the trade in lead and zinc is large and is increasing. In the province of Catalonia from 1,000 to 1,500 tons of lead and about 500 tons of zinc are consumed yearly, the pig lead being converted into white lead, salts of lead, sheets, tubes, and shot, and the zinc being converted into sheets, principally for making tanks and lining cases, and the spelter being used by the foundries for making brasses and mixtures and for the manufacture of yellow metal for sheathing wooden ships. In or near Barcelona, the capital of Catalonia, there are three lead companies, and besides them the Compañia Asturiana has agents in Barcelona who sell large quantities of tubes and sheets. In the province of Valencia the consumption of lead amounts to 200 tons a year, and of zinc to 100 tons.

The whole trade in lead and zinc in Spain is in the hands of the Spaniards. England is unable to compete in Spanish markets because she obtains her raw material from Spain. This fact is so apparent that the English firm T. Sopwith & Co., of Linares, Spain, have erected sheet, tube, and shot works at their mines there, and instead of sending their pig lead to England, France, or elsewhere to be treated, as was their custom a few years ago, they now export to those countries the lead in its manufactured form.

Zinc is not exported from Spain, but lead is exported in large quantities, most of it going to England, France, Belgium, Germany, and to America. The prices of both lead and zinc are fixed by the Spanish manufacturers within their own districts by adding to the current values in London and Paris the cost of bringing said metals from England and France, and then by reducing the total amount to figures that will prevent competition.

The duty Spain imposes on pig, sheet, and tube lead is 1·60 peseta on each 100 kilos (222½ pounds). The same duty is imposed on the same amount of spelter. On the same amount of manufactured zinc, such as is put in sheets, nails, and wire, the duty is 15 pesetas ($2.90).

AMERICAN LEAD AND ZINC.

American lead and zinc are not consumed, either in raw or the manufactured state, in this consular district, nor, I believe, in any other district of Spain. Whether they can be sent here advantageously or not is a question that only those can answer who are not only acquainted with the facts herein set forth, but who have accurate information regarding the location of the American mines and manufactories that produce lead and zinc suitable for exportation, and who are intimately acquainted with the cost of production and the rates of transportation.

The advantages Spain has in her own market are that the mines are good, that the wages of miners are low, being only from 40 to 60 cents a day, and that the cost of transportation is comparatively trifling. Her disadvantages are those incidental to the scarcity of cheap fuel.

HERBERT W. BOWEN,
Consul.

BARCELONA, *September 13, 1894.*

CARTHAGENA.

Going back to the occupancy of the Peninsula by the Romans and their working the lead mines of this district, it can be said that they did not work the zinc, but left it in the débris with the poor lead.

The depth of the lead mines at that time, as per recent discoveries, was equal or greater than recent mines. The miners on the "Cabezo Rajado" (Carthagena) found ancient mines at a depth of 300 meters,* this being the maximum depth of modern works. The mine "Triumfo" in Mazarron has been cut into the past December, the last sleeper, after reaching 320 meters on the lode, thoroughly worked and filled up with rubbish, prop wood, etc.

The mines commenced in 1840–'42, were not as deep as the present mines. Those works were executed on the masses of carbonates, almost superficial, as well as on those of calamines, all comprehended in a zone whose maximum depth is about 90 meters.

The lead ore worked in our days contains galena (sulphuret of lead) and zinc ore blendes. Those that are worked on the Silurian slate extend to a maximum depth of 200 meters, and an average of 150 meters. There are veins which are situated in the "traquita," such as those of Mazarron and "Cabezo Rajado" (Carthagena), which are worked to a maximum of 300 meters.

* The meter = 39·37 inches.

In the remainder of the districts of this province the mining at present is completely new and without any remarkable development.

Lead ores with gangue of pyrite-blende and "quartz" or slate (all gross) contain as follows: Mantle ores, 15 per cent; vein ores, 25 per cent.

Washed ores are divided in classes which vary from 12 per cent to 70 per cent.

Average of a parcel of washed ore is 45 per cent.

All the lead ores contain silver, having 2 ounces per 46 kilograms; those of Mazarron contain silver having 2½ ounces.

The sulphurs of zinc (blendes) are not worked unless indirectly with the lead ores, and they are obtained by "selecting" the lead by hand or else rewashing and recrushing the poor lead sands that result from the mechanical preparation of its ores.

In such state, in this district, they contain, viz: Maximum richness of the blendes, 48 per cent of zinc, although of this percentage the production is exceedingly small, to the extent of about 150 tons per annum; mined between "Cabezo Rajado" and Mazarron, the average richness being 31 per cent of zinc.

With regard to calamines there is a small quantity worked with a percentage up to 43 per cent, but, generally speaking, the average contains 30 per cent.

The average percentage of metal obtained by smelting can be easily deduced. There is a loss of 5 per cent through volatilization and 1 to 2 per cent in slags. On an average we may consider the loss about 8 per cent and about 92 per cent metal obtained.

The process preferred in the smelting of the ores is an equal one in the whole of this district, either worked with natural draft "tuyere" furnaces or forced draft furnaces, or else by the "Piltz" furnace.

The zinc is not elaborated here.

The lead ores, which are very variable, are, according to the mines, mixed in different proportions, so as to obtain a smelting "hearth" of a certain richness, but they are previously dried and calcined in reverberatory furnaces until producing an almost complete reduction (sulphur into oxide sulphates) as well as the heaping of the "matter," and this being made into pieces goes into the furnace mixed with rich slags or matte, and sometimes with rather limy silver ferruginous ores, also materials proceeding from demolition of furnaces. The combustible is coke.

"Piltz" furnaces are too well known to require description. "Tuyere" are cylindrical, about 4 meters in height, with an inferior hearth, forming thus a crucible or cup and a hatch or half door of argilla or fireclay and coals which has two communications, the upper called "drippings," which allow the slags to come out, and the under called "taphole," through which the lead comes out into a sort of cavity called receptacle (settler), from which lead is extracted after being poled in order that it may give way to the impurities and be carried afterwards to the molds.

The desilverization of a portion of the lead is done in Carthagena in one furnace belonging to the Marquis of Villamejor.

The cost of the reduction of 2,000 pounds of ore into spelter may be estimated at $6.

The zinc ores, as already stated, are not reduced here.

The value of the ore per ton of 2,000 pounds at the mines is $26 for washed lead ores containing 85 per cent of lead and 2 ounces of silver. It is easy to ascertain the price of the gross ore when we know that there is a discount to be made of about $4 for mechanical preparation charges, as well as 8½ per cent from the total metallic contents on said preparation.

The zinc ores are all bought and exported by the commission firms here, and each of them have their own special tariff. The most important agent ships chiefly to Antwerp, and the ore is then elaborated in Liege and a portion of the calcimines are sent to Cette or Bordeaux, all these fabrics being the property of the Societe Veille Montagne.

The price paid for the blende containing 31 per cent is $3 per ton of 2,000 pounds, and $4 per ton for calamine containing 30 per cent.

The average value of lead in pigs is $69.50 per 2,240 pounds, and $134 per 240 pounds of spelter.

In this district there are no manufactories at all of lead or zinc. All produced is either under the form of ore (zinc) or pigs of lead desilverized or with a content of silver, and is exported to foreign ports and to other Spanish provinces.

Manufactured lead is imported here chiefly from the north of Spain and Barcelona, where there are important manufactories. Spain, in general, is one of the first lead-producing countries, and this is perhaps the most productive province of Spain. If all the lead produced here were converted here into commercial products, there would be, of course, an enormous excess of production, i. e., the quantity of manufactured lead which is imported into my district is very insignificant as compared with the gross lead which we export.

As regards zinc, the production as well as the consumption is small.

Our lead in pigs is exported almost exclusively to London and Newcastle, and some small parcels to Liverpool and Glasgow, as well as to Antwerp, Marseilles, Havre, and Italy.

The production of zinc ores is decreasing more and more every year, although the production of lead ore is always the same, with very slight changes, and it is expected to increase, as there is still an immense number of mines in their native state in the inferior zone.

Wages of miners paid in this district are as follows: From 60 cents to $1.25 for miners; boys and other assistants, from 20 to 50 cents; bricklayers, from $1 to $1.25; hod-carriers, from 40 to 80 cents per day.

The wages of miners are variable according to the conditions of the mine, i. e., to the ventilation, health, and dangers which may exist as per condition of the land.

There is no foreign lead or zinc consumed in this district; all our supply of manufactured lead and zinc comes from the works of the "Real Companie Asturiana," established in Asturias (north of Spain), and from the sheet and tubing lead works of the Marquis of Villamejor at Barcelona.

The introduction of coarse spelters would be very difficult and the only good business here would be to start an industry of desilverization with this district lead and its conversion into sheets, tubes, white lead, shot etc.

In Mazarron the blende is found exceptionally with the lead, but in very small quantities, and needs a very long time before a small parcel can be made up. The lead works "Santa Eloise," the only one at Mazarron, exports to Germany and Italy about 1,000 tons per month of silver lead in pigs.

In Aguilas the silver-lead mines hardly reach 200 meters depth. The works at that port are stopped for the last few years, its development, depending upon "Sierra Almagrera" (a very rich mining district in the province of Almeria), actually in a complete state of slackness through want of draining.

CIRILO MOLINA Y COS,
Consul.

CARTHAGENA, *October 20, 1890.*

SWITZERLAND.

BASLE.

No mines of lead or zinc are worked in this consular district.

Foreign lead and zinc were introduced into Switzerland during the year 1889 in the following forms and quantities:

Lead in bars, ingots, plates, scrap, 1,984 tons, valued at 773,760 francs.

Lead, rolled, in sheets, pipes, wire, balls, shot, type metal, and type, 824 tons, valued at 372,330 francs.

Zinc, rolled, drawn, sheet, wire, 1,268 tons, valued at 837,144 francs.

Zinc in bars, ingots, plates, or scrap, 203 tons, valued at 114,128 rancs.

American lead and zinc are not mentioned in the official statistical tables of imports.

Inquiry among dealers and consumers of these articles leads to the conclusion that the conditions are not favorable to their introduction from the United States. The opinion universally expressed is that, though the import duty on lead is only from 30 centimes to 1.50 franc a quintal, and on zinc from 40 centimes to 1.50 franc a quintal, the freight from the United States on articles for which there is relatively so little demand would be so high as to make competition in this mar-

ket with the adjoining countries extremely difficult. Germany furnishes at present nearly all the lead used in Switzerland, while more than half the zinc comes from Belgium, France and Italy furnishing smaller quantities of the first, and France and Holland trifling quantities of the second.

GEORGE GIFFORD,
Consul.

BASLE, *September 15, 1890.*

HORGEN.

There are no mines of lead or zinc within the limits of this consular district.

Foreign lead and zinc are consumed, but only in small quantities and for local uses; lead for soldering etc., zinc for lining vessels, tanks, and the like.

American lead and zinc and their manufactures appear to be little known. The only effective manner of introducing them would be through the importing houses of Zurich, Basle, or Geneva.

LYELL T. ADAMS,
Consul.

HORGEN, *September 28, 1890.*

ST. GALL.

There are no mines of lead or zinc in this consular district.

FOREIGN LEAD AND ZINC.

Lead and zinc are consumed here, but in limited quantities. There are no firms importing large amounts of either.

The largest importer in Switzerland, I am informed, is Carl Geissler, of Basle, representing the firms of S. B. Goldschmidt & Sons, in Frankfort-on-the-Main, and Brandeis, Goldschmidt & Co., London.

Zinc, as the manufactured article, is chiefly used for sheeting. It comes mostly from Germany (Silesia) and Belgium. There is also some English zinc used, but not much. It is imported in sheets. The duty on it in bar is 40 centimes per 100 kilos, and in sheets 1.50 franc* per 100 kilos.

Spelter is imported in plates and is mostly used for galvanizing and for making alloys, such as brass and yellow metal.

It costs at present 65 to 66 francs per 100 kilograms delivered at the railway station.

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* The franc=19.3.

Lead comes mostly from Spain and the Rhine country of Germany. It is imported in pigs of about 1 cwt. and costs, delivered at the station, about 37 francs per 100 kilograms. The duty on leadin raw is 1·50 franc per 100 kilos.

There is no American lead or zinc used here, but it is thought there would be a good sale for it in Switzerland, if prices and quality could be made such as to compete.

The mines of Belgium and Germany are large enough to supply the whole continent, and there is not the danger, in the case of zinc, of oxidization in transit, to which the American product would be liable.

I think the Lead and Zinc Mining Association mentioned in the Department's circular would do well to communicate with Mr. Carl Geissler, at Basle, who has expressed to me a desire to be put in correspondence with leading American exporters of lead and zinc, especially those able to offer these articles at competing prices.

W. HENRY ROBERTSON,
Consul.

ST. GALL, *October 28, 1890.*

ZURICH.

There are no lead or zinc mines in the consular district of Zurich. Of the 27 mines in Switzerland now or formerly yielding these metals, 14 are in canton Wallis, 12 in canton Graubuenden, and 1 in canton Berne. Many of these were worked as long ago as the time of the Roman occupation, and have long since ceased to be profitable.

FOREIGN LEAD AND ZINC.

The following table shows the amounts of lead and zinc imported into, and exported from, Switzerland during the year 1889, viz:

Description.	Imported.	Exported.
	Francs.	*Francs.*
Lead in bars and blocks, or broken	774,000	48,000
Lead rolled, sheet, piping, etc	372,000	18,000
Lead type	207,000	130,000
Zinc rolled, sheet, wire, etc	837,000	3,000
Total	2,190,000	199,000

Of the imported lead, at least 49 per cent comes from Germany, and mostly in ingots, the favorite mark being the "Emserhütte;" of the remaining 10 per cent, the greater part is Spanish lead of the mark known as "Figuerora," which is imported via Barcelona and Marseilles. The quality of this latter lead is finer, and the original price cheaper than the other, but the increased cost for freight from so great a distance causes the ultimate preference for the German lead.

Of the imported zinc, Belgium furnishes about 60 and Germany 30 per cent, mostly in rolled sheets, the favorite marks being the "Vieille Montagne" and the "Nouvelle Montagne" (Belgian) and the "Silesia" (German).

While it is impossible to obtain exact statistics as to the amount of each of these metals imported into the single canton of Zurich, competent estimates place the import of lead at 60 to 70 tons (mostly in bars) and of zinc at 300 to 350 tons (mostly in sheets) per annum.

A ton of lead delivered here, freight and duty included, costs $75.25 in ingots or $79.13 in pipes or rolled sheets.

A ton of zinc delivered here, freight and duty included, costs $127.38 in rolled sheets.

Lead pays an entry duty of 58 cents per ton on ingots and of $2.90 per ton on pipes and rolled sheets. Zinc in rolled sheets also pays a duty of $2.90 per ton.

AMERICAN LEAD AND ZINC.

I find upon inquiry that no American lead or zinc, or their manufactures, are consumed in this consular district. The cost of transportation and the proximity and productiveness of the German and Belgian mines will easily explain this fact. The best manner of introducing the American article would be to establish a temporary depot at one of the great seaports, Antwerp, Bremen, or Hamburg, and send out samples of the American products for trial, to the leading firms in the principal centers of consumption. The quality and price at which the article could be delivered, inclusive of freight and duty, would determine at once whether their permanent introduction were practicable.

The leading dealers in metals in this city are: J. Baeumlin, Seilergraben 33, Zurich; Ad. Bremy Sohn, Seidengasse 15, Zurich; Adolf Diener, Sihlstrasse 2, Zurich; Knechtli & Co., Waaggasse 6, Zurich; Ernst Schoch & Co., Oberdorfgasse 22–26, Zurich.

GEORGE L. CATLIN,
Consul.

ZURICH, *September 10, 1890.*

TURKEY.

There are several lead and zinc mines, both in European Turkey, especially in the province of Macedonia, and in Asiatic Turkey, or Anatolia; but few of them are in working order, although permission has been granted to the parties concerned for the mining of same.

It is impossible to report upon the phases of lead and zinc mining in this consular district; first, because no official information can be obtained on the subject, and second, for the reason that private parties

who own or rent these mines or other mines in Turkey, feel reluctant in furnishing any information concerning mining. They think that data or details which they may give will be worked against them and unless they have some direct interest in the matter or expect to get something out of it, they will not furnish the desired information.

About 35 permits have been granted by the Ottoman Government to various parties who applied for them during the year 1889 for lead and zinc in mining researches, both in European Turkey and Anatolia, viz, for 23 lead miningin European Turkey, especially in Macedonia; 8 for lead mining in Asiatic Turkey; and 4 for zinc, both in European and Asiatic Turkey. It has not been ascertained, however, whether all the applicants availed themselves of the authority granted to them, or if their researches had any result.

JOSEPH AZARIAN,
Vice Consul-General.

CONSTANTINOPLE, *November 12, 1890.*

THE UNITED KINGDOM.

LEAD AND ZINC IMPORTS.

The total amount of lead imported into the United Kingdom in 1888 was 132,880 tons, of which 86,004 tons came to London; and zinc, 1,566,045 cwt.,* of which 871,258 cwt. came to London.

I inclose a statement giving the imports and exports of lead and zinc for 1888 from and to various countries.

AMERICAN LEAD AND ZINC.

The amount of lead imported from the United States in 1888 was 6,169 tons, of the value of $419,105, and exports thereto amounted to 2,351 tons, of the value of $165,630.

The amount of zinc ore imported from the United States in the same year was 993 tons, valued at $27,125, and crude zinc 113 tons, of the value of $9,615.

The only way I could suggest for extending American trade would be for manufacturers in the United States to appoint responsible agents in this city for the sale of these goods.

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* The cwt.=112 pounds.

Imports into and exports from the United Kingdom of lead and zinc in 1889.

IMPORTS.

Whence.	Quantity.	Value.
Lead ore.	*Tons.*	
Germany	325	$11,645
Holland	378	14,610
France	1,197	46,960
Spain	842	27,155
Italy	574	22,880
Turkey	1,254	50,180
Algeria	4,852	42,455
United States of America	140	5,620
United States of Colombia	531	21,350
Peru	1,761	72,180
Chile	3,225	128,040
Argentine Republic	148	5,660
South Africa	1	50
Australasia	1,565	63,280
Other countries	450	16,105
Total	17,243	528,170
Pig or sheet lead.		
Germany	4,708	326,190
Holland	4,987	345,585
Belgium	3,322	227,775
France	3,871	273,225
Spain	78,328	5,425,890
Greece	12,993	927,955
Turkey	1,076	72,320
Algeria	98	7,350
United States of America	6,169	419,105
Hongkong	192	12,730
Australasia	17,039	1,202,480
Other countries	97	6,510
Total	132,880	9,247,115
Lead manufactures.	*Cwt.*	
Germany	810	5,075
France	639	5,440
British Possessions	66	220
Other countries	549	4,385
Total	2,064	15,120

Whence.	Quantity.	Value.
Zinc ore.	*Tons.*	
Norway	711	$10,765
Germany	1,336	43,750
Holland	278	8,925
Belgium	565	36,340
France	2,295	73,090
Spain	917	12,045
Italy	6,490	172,955
Greece	8,300	158,825
Algeria	1,138	22,480
United States of America	993	27,025
Australasia	163	4,850
British North America	87	1,280
Other countries	318	8,280
Total	23,541	580,610
Crude zinc.		
Germany	32,005	2,770,050
Holland	15,626	1,398,360
Belgium	9,122	791,645
France	2,612	225,350
Italy	118	8,850
United States of America	113	9,615
South Africa	9	770
Australasia	211	13,540
British North America	97	4,575
Other countries	165	13,115
Total	60,078	5,235,870
Zinc manufactures.	*Cwt.*	
Germany	87,698	443,300
Holland	189,608	950,560
Belgium	85,291	437,530
France	1,656	11,540
Channel Islands	103	2,025
Other British Possessions	47	225
Other countries	82	510
Total	364,485	1,845,690

EXPORTS.

Lead ore.	*Cwt.*	
France	9,740	$23,480
Other countries	9,680	22,395
Total	19,420	45,875
Pig or sheet lead.	*Tons.*	
Russia	1,756	118,305
France	3,493	280,350
United States of America	2,351	165,630
Canada	1,174	81,430
Other countries	1,703	107,165
Total	10,477	752,880
Lead manufactures.	*Cwt.*	
Canada	58	545
Other countries	206	1,210
Total	264	1,755

Zinc ore.	*Tons.*	
Belgium	1	$70
Crude zinc.		
Holland	380	30,030
British East Indies	621	47,580
Australasia	382	25,895
Other countries	411	36,180
Total	1,794	139,685
Zinc manufactures.	*Cwt.*	
British East Indies	6,889	31,960
Australasia	6,430	33,505
Other countries	7,798	41,745
Total	21,117	107,210

OLIVER R. JOHNSON,
Acting Consul-General.

LONDON, *October 20, 1890.*

BRADFORD.

There are no lead or zinc mines within the limits of this consular district.

FOREIGN LEAD AND ZINC.

Foreign lead and zinc are consumed mainly for roofing and ordinary plumbing purposes. They are also utilized to some extent in place of tinware for household utensils. Their use for roofing is to only a limited extent, as the material ordinarily used for that purpose is slate.

AMERICAN LEAD AND ZINC.

American lead and zinc and the manufactures thereof are not consumed in this district in any considerable quantities.

It is claimed by experts whom I have consulted on this subject that the products of the American mines are not well adapted to the atmospheric conditions prevailing in this climate, and for this reason it is believed that their introduction would be attended with obstacles that could not easily be overcome. A very large percentage of the lead and zinc used in this district is imported from Belgium.

JOHN A. TIBBITS,
Consul.

BRADFORD, *February 20, 1891.*

DUBLIN.

LEAD MINES IN IRELAND.

So far as the mining industry is concerned in this consular district, or for that matter in Ireland, but little information of interest can be contributed. The industry amounts to no considerable item in this island. The published statistics and such information as I have been able to gather from private sources, covering a period of years, show that in 1878 two lead mines were worked in Ireland, one at Newtownards, in the county of Down, and one at Luganure, in the county of Wicklow. For 1878 the value of the products of these mines amounted to £14,090. In 1883 the value of the products of the two mines dropped to £3,397. In 1884 it was £2,688; in 1885, £790; in 1886 only one mine was worked, the value of its product being £1,928. In 1887 the product of one mine amounted in value to £2,504; in 1888 to £2,403, and in 1889 to £1,853. Work at this mine was abandoned about eight months since.

Lead mining in Ireland has not proven profitable. The foot and hanging walls which inclose the lead-bearing formation are of granite, which, of course, adds greatly to the expense of running. The deposits

of lead are very "bunchy," and the intervening ore is so very lean that its reduction is not satisfactorily profitable. However, it is probable that the mine at Luganure, in Wicklow, will be worked again at an early date in the hope of finding richer and more uniform deposits of paying ore. The recent suspension was partially caused by the property changing hands.

At the time work was suspended at the mine in question information upon the points submitted by the Department would have been substantially as follows:

DEPTH OF MINES.

The depth of the mine was about 85 fathoms, (510 feet) the greatest depth reached.

METAL IN ORE.

The average per centum of metal in the ores melted was about 75.

METAL OBTAINED BY SMELTING.

The average per centum of metal obtained by smelting process was about 73.

PROCESS OF SMELTING.

The process used in smelting the ores is what is known as the reverbatory furnace, with flue 1 mile long.

VALUE OF SPELTER AND ORE.

No spelter contained in ore.

The value of a ton of ore at the mines is given at about £7. It should be added here, however, that the ore is carted 9 miles to a railway, thence 30 miles by rail, and is again carted 1½ miles to the works.

STATUS OF PRODUCTION.

The supply of the mine is not nearly sufficient to meet the local demands. The production of lead ore in Ireland is decreasing. There are no zinc industries of any description in Ireland.

WAGES OF MINERS.

When the mines are in operation the wages of miners are from 15 to 17 shillings per week.

FOREIGN LEAD AND ZINC.

Foreign lead and zinc are used to a considerable extent in this consular district. Official statistics for the year 1888, the latest that are available, show that there was imported into the port of Dublin that

year 730 tons of pig lead and sheet lead. The importations, as nearly as I have been able to ascertain, are from Spain and England and Wales. The importations of zinc at the same port during the same period were 1,834 cwt. The official reports contain no mention of the importations of lead ore; but as the result of private inquiry I learn that there are about 500 tons of lead ore imported at this port annually, mostly from Wales and the Isle of Man. This is converted into the merchantable product by a local smelting and sheet-lead manufacturing concern.

AMERICAN LEAD AND ZINC.

As far as I can learn there are absolutely no importations at this port of American lead and zinc, and therefore none is consumed in this district, and, for that matter, but very little is imported into the United Kingdom, the aggregate of pig and sheet lead imported from the United States being only 4,588 out of a total from all sources of 145,203 tons, and of lead only 10 tons. The statistics regarding the importations of zinc in all its forms to the United Kingdom are as follows from all countries: Zinc ore, 24,301 tons; of this amount 1,323 tons are imported from the United States; importations of crude zinc, 56,420 tons; from the United States, 511 tons; importations of manufactured zinc, 384,070 cwt.; from the United States, 46 cwt. These figures are for the year 1889.

So far as I have been able to ascertain, the only reason why American lead and zinc are not used in this district is because the American product is considerably higher than the similar products from other countries. A partial reason is also, no doubt, found in the product of the United Kingdom.

It naturally follows that the only way of introducing the American lead and zinc products in this and other markets of the United Kingdom, or to extend the trade where now introduced, is for our miners and manufacturers to be able to compete successfully in the matter of prices with similar producers of other countries.

ALEX. I. REID,
Consul.

DUBLIN, *September 23, 1890.*

DUNFERMLINE.

There are no mines of either lead or zinc in my district. This is true of Scotland except a limited product in the county of Lanark at a place called Lead Hills.

CONSUMPTION OF LEAD AND ZINC.

The lead and zinc employed in this district is procured from four houses, three of which are in Edinburgh, and one, the largest, in Newcastle.

The lead is purchased in sheets averaging 15 cwt. each. Also water supply pipes in bundles of 1½ to 2 cwt. each. Lead soil pipes are made at the Leith works of Campbell & Co. and other houses, in 16 feet lengths, of all sizes and weights as desired, and what are known as traps are procurable at the same houses. Parties handling zinc and lead in the towns of this district derive all their supplies from these sources and in the forms named.

No house known to me, or to intelligent parties here, long in the trade, either in Dunfermline, Cupar, St. Andrews, Kirkcaldy, or Dysart, obtain supplies from other sources than those named and in the forms described.

There are no manufactories of zinc or lead in this district, except in the ordinary course of plumbing work, and American lead, as such, is unknown. The demand must long be too limited to give the trade special value or stimulate its introduction. No American agents for lead or zinc are known here.

JAMES D. REID,
Commercial Agent.

DUNFERMLINE, *October 14, 1890.*

FALMOUTH.

There is no lead or zinc mining carried on in my district at the present time. The mineral statistics show that during 1889 no lead was raised, but that 129 tons of zinc ore were raised, producing 60 tons by smelting, valued at $846.76. This was produced at Mellanear mine, St. Erth, which has since stopped working.

The present value of spelter is about $121.66 per ton.

I addressed Mr. Edward Tangye, of Redruth (in my district), on the subject of the Department's circular, and this gentleman has written me as follows:

Respecting lead and zinc, the latter is used pretty largely in Cornwall in the form of galvanized coating for corrugated iron roofing, but the nearest place of manufacture is Bristol. No doubt it is also used in Cornwall by the various shipping companies, mixed with copper and tin, as brass bolts, nuts, etc. American zinc ores are quite unknown to me; zinc ores are, I believe, imported from Spain. As to lead, I know of no one except myself using foreign lead (Spanish). American lead is quite unknown to me. I use more than 90 per cent of English lead. Total amount per annum between 50 and 60 tons.

Respecting the introduction of American lead and zinc, I think that this might be done through the great manufacturing centers of Great Britain.

HOWARD FOX.

FALMOUTH, *October 17, 1890.*

GLASGOW.

There are some lead mines in the south of Scotland, but the cost of working them was so great that they have been practically abandoned for many years.

IMPORTS OF ORE AND SPELTER.

There is one white lead manufactory of considerable size in this city, and they inform me that all the ore used by them, some 9,000 tons annually, is imported from Spain. I am also informed that the various spelters used here are imported from Germany.

AMERICAN LEAD AND ZINC.

Oxide of zinc is imported into this district from the United States and some other countries in considerable quantities (more largely from Germany than elsewhere). There can be but a single suggestion in relation to the best means of enlarging the trade in American lead and zinc, viz, to furnish a superior quality at a moderate price, or as good a quality as can be obtained elsewhere at a less price.

L. W. BROWN,
Consul.

GLASGOW, *January 16, 1891.*

LEITH.

No lead or zinc is produced within the consular district of Edinburgh and Leith.

FOREIGN LEAD AND ZINC.

All leads foreign to Great Britain come from Spain. One cause for such preference is the excellence of Spanish lead on account of its soft quality, which makes a good groundwork for mixing with old lead.

American lead is not used in this district. No explanation is given therefor by the dealers but this, that they have no knowledge of its excellence.

As two weeks are required to bring lead from Spain, nearness of port will be in favor of the United States, and there is no apparent reason why American lead of similar quality should not compete with Spanish if properly introduced by first-class commercial houses.

The foreign zinc used within this consular district comes from Belgium. This zinc is considered the best and always commands the market.

Silesian zinc, which is used to a moderate extent, is of an inferior grade, architects always in their specifications stipulating for Belgian

zinc. Dealers find a further reason for using Belgian zinc in the fact that it has a short transit, coming from Antwerp with a voyage of only 400 miles.

The imports of these two metals to Leith and neighboring ports on the Firth of Forth during the past two years are as follows:

Year.	Imports of lead.			Imports of zinc.	
	Leith.	Grange-mouth.	Granton.	Leith.	Grange-mouth.
	Tons.	*Tons.*	*Tons.*	*Cwt.*	*Cwt.*
1888	331	60	98	52,127	25,050
1889	2,194	10	.....	58,278	17,736

WALLACE BRUCE,
Consul.

EDINBURGH, *October 8, 1890.*

LIVERPOOL.

DEPTH OF MINES.

In some districts the old mines are, of course, deeper than they were, for instance, in the Isle of Man, the celebrated Foxdale and Laxey mines. The former is now about 1,620 feet deep and is richer than ever (although, of course, more costly to work) notwithstanding the fact of their having returned about $9,720,000 worth of ore to the present adventurers in addition to very large sums before. The latter (the Laxey) is about 1,740 feet deep, and is now returning about $82,620 worth of blende (ore of zinc) and $131,220 worth of lead per annum, and still pays large profits.

In other districts the deposits of ore do not continue below certain depths, being cut out by nonbearing measures, as in Flintshire, Denbighshire, etc., where the old "Talargoch" which was worked for four or five centuries and closed down in 1884 consequent upon the enormous area of the exhausted workings giving off more water than could be coped with profitably, with "stopes" or sections of ground still standing which were calculated to yield from 15 up to 35 tons of blende to the fathom for the width of the lode. This wonderful mine used to sell up to 600 tons of lead per month and some hundreds of tons of blende, but still it was all from above a certain level (215 yards from surface) where the nonbearing measures began. These remarks as to depth of workings will apply to such mines as Halkyn, Minera, etc., which, although they have made and are still making enormous returns, are not any deeper than they were fifty years ago, but have to trust to the ground parallel to known lodes to find similar ones, which they find by crosscutting the country, and seldom without some measure of success.

METAL IN ORES.

The total production of lead ore in the United Kingdom in 1889 was 48,465 tons, yielding 35,604 tons of "pig," so that the average may be taken as 77 per cent before making allowance for loss in smelting, which is taken as 5 per cent of amount indicated by the dry assay. The blende (ore of zinc) produced in the United Kingdom for 1889 would show an assay of 50 per cent of zinc.

METAL OBTAINED BY SMELTING.

The amount of metal obtainable from lead ore is taken at 95 per cent of assay; the actual yield of metal as nearly as possible would be 73½ per cent of ore weight. The production of blende (ore of zinc) for the United Kingdom in 1889 was 23,202 tons, which yielded 9,392 tons of metallic zinc, or 40½ per cent. The loss of metal in smelting ranges from 15 to 24 per cent of metal shown by assay, according to the quality of the ore. Blende has been sold from one mine assaying 64.4 per cent of metal, being of so volatile a nature and so free from foreign substances as to lose only from 7 to 10 per cent of assay in the smelting.

PROCESS OF SMELTING.

For spelter, the processes preferred here are: (1) The Silesian, or open retort, by which 230,000 tons of ore are reduced annually in Europe; (2) the Belgian, and (3) the English, or closed retort, very similar to the Belgian, the combined annual reduction of both of which processes in Europe is 30,000 tons.

COST OF REDUCTION.

No definite answer as to cost of reduction can be obtained. Smelters naturally refuse to disclose a strictly private detail of their business. After many futile attempts to get accurate information I can only state the cost approximately as $25 to $30 per ton.

VALUE OF ORE.

The average value of British lead ore at the mines was in 1889 as near as possible $43.12 per ton of 2,240 pounds, or $38.50 per ton of 2,000 pounds. The mines being as a rule some distance from the rails and the smelters' works, the cost of carriage is frequently a considerable item, in some cases 75 cents to 97 cents per ton, and in others as much as $2.43. The average value of blende for 1889 was $20.33 per ton of 2,240 pounds, or $18.13 per ton of 2,000 pounds. (The above remarks on carriage of lead will also apply to blende.)

VALUE OF SPELTER.

The value of spelter has been subject to great fluctuations. It was up to $136.26 per 2,240 pounds, or $121.66 per 2,000 pounds in 1873, while in 1884, 1885, and 1886 it dropped as low as $68.13 per ton of

2,240 pounds, or $60.82 per 2,000 pounds, but has since considerably recovered, to $121.66 per 2,240 pounds, or $108.62 per 2,000 pounds. The present price is about $111.92 per 2,240 pounds, or $99.92 per 2,000 pounds.

IMPORTS AND EXPORTS.

The production of lead in the United Kingdom is quite insufficient to meet the demand, as the following table will show:

Year.	Obtained from British ores.	Imported and obtained from foreign ores.	Exported, including ore.	Available for home consumption.
	Tons.	*Tons.*	*Tons.*	*Tons.*
1889	35,604	156,658	65,454	126,808
1888	37,578	146,674	59,897	124,355

It is necessary, therefore, to import about 90,000 tons of lead annually for home consumption only, and over 65,000 tons for exportation. Of this amount in 1889 the United States sent only 10 tons of ore, 4,588 tons pig and sheet, and 88 cwt. manufactures. The chief sources of supply are Spain, 75,477 tons of pig and sheet and 1,011 tons of ore, and Australian colonies, 36,209 tons of pig and sheet and 1,580 tons of ore. As to exports, 463 tons of pig and sheet lead and 18 tons of piping were sent to the United States in 1889. England's chief customers are as follows:

Whither exported.	Pig lead, etc.	Sheet lead, etc.
	Tons.	*Tons.*
Russia	4,500	2,361
Portugal	1,176	26
China and Hongkong	11,505	427
Japan	325	1,445
Australia	1,319	3,330
Canada	3,483	923
Brazil	665	823
Argentine Republic	765	4,205

The production of blende in the United Kingdom for 1889 was 23,202 tons of ore, giving 9,393 tons of metallic zinc, which was totally inadequate for requirements, as will be seen by the following table of imports and exports:

Description.	Quantity.	Value.
	Tons.	
British metal	9,393	$933,834
Imported from sundry places:		
Crude zinc	56,420	5,204,223
Manufactures	19,203	1,771,397
Zinc ore	24,801	631,454
Exported to sundry places:		
Ore	1,183	.....
Manufactures	8,792	.....

Of these imports the United States sent only 1,323 tons of ore, 511 tons of crude zinc, and 46 cwt. of manufactures, of the value of $80,759, as the following table shows:

Imported from—	Ore.	Crude zinc.	Manufactures.	Value.
	Tons.	*Tons.*	*Tons.*	
United States	1,323	511	*46	$80,759
Germany	1,495	26,787	4,193	3,032,139
Holland	195	17,585	10,138	2,842,477
Belgium	497	7,033	4,701	1,182,719
France and Italy	14,434	3,654	161	751,487

*Hundredweight.

Notwithstanding the very large import of this metal England exported only 1,183 tons of ore (to Channel Islands) and 8,792 tons of manufactured spelter, Holland taking 1,955 tons; East Indies, 3,326 tons; China and Hongkong, 674 tons; the United States 15 tons, and other countries the balance, 2,822 tons.

STATUS OF PRODUCTION.

The production of lead and blende in the United Kingdom has greatly decreased of late years, the decrease of the former in 1889 as compared with 1888 being 2,794 tons of ore and 1,974 tons of metal, and of the latter 3,206 tons of ore and 610 tons of metal.

WAGES OF MINERS.

The wages of miners (laborers) vary from 75 cents to 90 cents per day, and of surface men from 50 cents to 75 cents per day, when employed by the day.

THOS. H. SHERMAN,
Consul.

LIVERPOOL, *January 13, 1891.*

SOUTH OF IRELAND.

Although deposits of both lead and zinc have been found, as I am informed, in the south of Ireland there are no mines of either at present operated.

LEAD AND ZINC CONSUMPTION.

About 250 tons of lead are brought to Cork annually, of which a small part (less than 50 tons) is derived from mines in the County of Wicklow, near Dublin. I have been unable to learn the quantity of zinc consumed in this district, but the supply of this metal, as well as the principal supply of lead, is brought from England, into which country both are for the most part imported from the continent of Europe.

Lead is here used chiefly by plumbers, slaters, and other workmen for building purposes—for example, over shop fronts, bay windows, for gutters, valleys, etc., and in lining cisterns, tanks, baths, etc. Zinc is sometimes used in lining these latter articles, but lead is more generally adopted. Zinc is also used by founders in manufactures of brass and its adaptation to machinery.

AMERICAN LEAD AND ZINC.

I can not hear of any lead or zinc or their manufactures of American origin used in this part of Ireland, and it does not seem likely that the introduction of these American products or manufactures is practicable at the present time.

JOHN J. PIATT,
Consul.

CORK, *November 18, 1890.*

YORKSHIRE.

DEPTHS OF MINES.

Lead mining in this vicinity is said not to reach a greater depth than some 30 fathoms (180 feet). The ordinary method of rock mining, by sinking and drifting to and on the mineral deposit, is understood to be the method generally pursued for mining the ores; which, as a rule, lie in lodes or veins surrounded by the country rock. There is no zinc mining reported. Such (if any) product as there may be would be probably in the nature of a by-product from the lead mines.

METAL IN ORES.

The average per cent of metal in the lead ores is called as high, perhaps, as 80 per cent.

The official mineral statistics for the year 1889, prepared by Her Majesty's inspectors of mines, reckon the amount of lead obtainable in smelting as 95 per cent of the amount indicated by the dry assay. Thus, 80 per cent dry assay would be taken to yield 76 per cent of metal.

The figures given by this publication for Yorkshire for the year in question are as follows: Dressed lead ore, 2,056 tons (2,240 pounds); amount of lead obtainable in smelting, 1,439 tons; value of ore at the mines, £16,956 ($82,516.37).

These figures show a proportion of total production and value for Yorkshire as compared with the total for England and Wales:

	Per cent.
Dressed lead ore, about	4 3/11
Amount of lead obtainable in smelting, about	4 1/11
Value of ore at the mines, about	4 9/11

PROCESS OF SMELTING.

The process of smelting given in the British Encyclopædia, issue of 1882, as obtaining in Wales and the south of England is by means of a reverberatory furnace. The sole of the furnace is paved with slag from previous operations, and it has in the middle of its surface a depression where the metal collects and is thence drawn off through a tap hole.

Dressed ore (12 to 24 cwt. of 112 pounds per cwt.) is introduced from the top through a hopper, and is exposed to moderate flame until a certain proportion of the ore is oxidized. Openings through the side of the furnace permit the ore to be stirred, so as to constantly renew the surface exposed to the air.

Rich slags from former operation are next added, together with a quantity of quicklime. This diminishes the fluidity of the mass in the next stage, when, with closed air holes, the heat is raised, causing the oxide and the sulphate on the one hand, and the sulphide on the other, to reduce each other to metal. The lead produced runs into the hollow and is tapped off. The roasting process is then resumed, to be followed by another reduction, and so on.

In Cumberland. Northumberland, and Durham, according to the same authority, the reverberatory furnace is used only for roasting the ore; and the oxidized ore is then reduced by fusion in a low, square blast furnace (a "Scottish-hearth furnace"), which consists of a rectangular cavity lined with cast iron, as is also the inclined sole plate which projects in front of the furnace. The outside surface of the sole plate is furnished with grooves which serve to guide any molten metal from the mass which may be placed on it into a cast-iron pot set to receive it. At the back is a tuyère for the blast.

As a preliminary to smelting the "browse" (half-fused and imperfectly reduced ore) left in the preceding operation is introduced, together with some peat and coal, and heated with the help of the blast. It is then raked out on the front of the sole plate (the work stone) and divided into a very poor "gray" slag, which is put aside, and a richer portion which goes back into the furnace. Some of the roasted ore is strewed upon it, and after a quarter of an hour's working the whole is taken out on the work stone, where the lead produced runs off. The "browse," after removal of the "gray" slag, is reintroduced, ore added, and after a quarter of an hour's heating the mass is again set on the work stone as before.

At Alston Moor, Cumberland, plumbiferous slags (oxide, sulphate, and silicate of lead) are introduced into a blast furnace similar to the one just described, together with coal ashes, furnace bottoms, and other residues, and melted down, making lead and a poorer slag. The lead is run off as much as possible. The slag is then run into water, which disintegrates it so that the particles of metal shut up in it are set free and become recoverable by elutriation or washing.

At Alston Moor the smoke from the smelting process is led through flues to a chamber which connects with a chimney. The chamber is divided into compartments by vertical screens which force the smoke through intervening water, wherein, and in the flues, most of the lead which the smoke contains is deposited. The deposit from the smoke is then worked up for the lead which is in it.

The principal English and Welsh lead mines are in Durham, the Isle of Man, Derbyshire, and Flintshire, reckoning by the 1889 returns, since these 4 districts account for 26,052¾ tons of dressed lead ore out of a total for the year of 44,184½ tons derived from an aggregate of 17 localities named. The total for Scotland for the same period was 4,063 tons and for Ireland, 218 tons, giving a gross total for the United Kingdom for the year 1889 of 48,465¼ tons against 51,529 tons for the previous year, a falling off of 3,063¾ tons.

METAL OBTAINED BY SMELTING.

The amount of lead obtainable by smelting for the year 1889 is stated to be—

	Tons.
England and Wales	32,281½
Scotland	3,163
Ireland	160
United Kingdom	35,604½

The amount of silver obtainable from the lead for the same time:

	Ounces.
England and Wales	280,374
Scotland	24,943
Ireland	832
United Kingdom	306,149

VALUE OF ORE.

The value of the ore at the mine for the same year: England and Wales, £395,290 ($1,923,678.79); Scotland, £32,504 ($158,180.72); Ireland, £1,853 ($9,017.62); United Kingdom, £429,647 ($2,090,877.13).

VALUE OF METAL.

The value of the metallic lead obtainable for the same period, according to the mean of monthly prices of common pig lead in the London market for the year, is £464,342 ($2,259,720.34).

The value of the silver obtainable from the lead is £54,453 ($264,995.52).

In calculating the quantity of silver obtainable from lead ores the amount of silver in ores containing less than 3 ounces silver per ton of ore has been omitted, as in most cases it is not extracted; and it has been assumed, the report states, that on an average one-fourth ounce of silver remains in each ton of desilverized pig lead.

PRODUCTION OF YORKSHIRE.

Details of production are given for Yorkshire as follows:

Name and situation of mine.	Dressed lead ore.	Percentage of lead by assay.	Amount of lead obtainable in smelting.	Value of ore at the mines.	
Yorkshire (North Riding):	*Tons.*	*Per cent.*	*Tons.*	£	*Dollars.*
Apedale	18	.....	12	144	700.78
Arkendale, Arkengarthdale	946	75	674	8,514	41,433.38
Bowes Cross, Boldron	22	.....	16	178	866.24
Hurst, Ruth	390	74	274	2,389	11,626.07
Lunehead, Michleton	81	.....	57	618	3,007.50
Old Gong, Smoledale	112	55.5	59	789	3,596.34
Scargill, Scargill	7	.....	5	56	272.52
Silverbond, Lume	3	.....	2	25	121.66
Sir Francis, A. D. mines, Swaledale	.....	.....	.....	.....	.....
Whiteside and Grinton, Swaledale	.....	.....	.....	.....	.....
Yorkshire (West Riding): Cockrill and Sunnyside, Craven Moor United, East Grassington, Limley, Lolly Scarr, Stoney Groves — Pateley Bridge	477	75	340	4,293	20,891.88
Total	2,056	.....	1,439	16,956	82,516.37

LONDON LEAD PRICES.

Prices of metallic lead per ton in London market, 1889.

Year.	English lead.						Foreign lead, Spanish.		
	Pig common.			Pig (W. B.)					
	£.	s.	d.	*Dollars.*	£.	s.	d.	*Dollars.*	£.	s.	d.	*Dollars.*
Highest prices	15	0	0	73.00	16	0	0	77.86	14	12	6	71.17
Lowest prices	12	10	0	60.83	13	10	0	65.70	12	0	0	58.40
Mean of monthly, 1889	13	0	10	63.47	14	6	7	69.73	12	15	9	62.23
Mean prices previous year	13	18	3	67.71	15	11	3	75.73	13	10	5	65.80

BRITISH IMPORTS AND EXPORTS OF LEAD AND LEAD ORE.

Exports of lead and lead ore from the United Kingdom.

Year.	British lead.			Foreign lead.		
	Lead ore.	Pig lead.	Lead: rolled, sheet, piping, and tubing.	Lead ore.	Pig lead and sheet lead.	Lead manufactures.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Cwt.*
Total export 1889	62	28,422	23,618	253	13,162	67
Total export 1888	36	28,112	20,504	971	10,477	264

Imports of lead and lead ore into the United Kingdom.

From.	Lead ore.	Pig lead and sheet lead.	Lead manufactures.
	Tons.	*Tons.*	*Cwt.*
Spain	1,011	75,477	.....
United States	10	4,588	88
Other countries	13,298	65,138	1,377
Total import 1889	14,319	145,203	1,465
Total import 1888	17,243	132,880	2,064

BRITISH SMELTING PRODUCTS.

Quantity of lead obtainable in the United Kingdom from British and foreign ores, quantity imported and exported, and amount available for home consumption.

Year.	Lead obtainable from British ores.	Lead imported and lead obtainable from foreign ores.	British and foreign lead exported, including lead in ores exported.	Available for home consumption.
	Tons.	*Tons.*	*Tons.*	*Tons.*
1889	35,604	156,658	65,454	126,808
1888	37,578	146,674	59,897	124,355

There is no production of zinc reported in this district. Such amount as may be produced is so small as to be inconsiderable.

LONDON SPELTER PRICES.

The prices of spelter per ton in the London market in 1889 were as follows:

Year.	English spelter.		Foreign spelter.			
	Swansea.		Silesian ordinary.		Silesian special.	
	£. s. d.	*Dollars.*	*£. s. d.*	*Dollars.*	*£. s. d.*	*Dollars.*
Highest prices, 1889	25 0 0	121.66	24 5 0	118.01	24 10 0	119.22
Lowest prices, 1889	17 0 0	82.73	16 15 0	81.51	17 0 0	82.73
Mean of monthly, 1889	20 9 2	99.56	19 16 3	96.42	19 19 8	97.25
Mean prices, 1888	19 2 10	93.15	18 0 1	87.62	18 6 9	89.24

There has been an advance in price and spelter has been quoted at £27 10*s.* ($133.83) to £28 ($136.26) per ton. It is said to have been as low as £15 ($73). My informant considers the usual average price to be about £20 ($97.33) per ton.

[From the Yorkshire Post of September 9.]

Revival in galvanized sheets.—The revival in the galvanized sheet-iron trade is progressing satisfactorily. Midland makers yesterday raised their prices to £13 per ton for galvanized corrugated sheets in bundles for 24-gauge delivered f. o. b. Liverpool in lots of 10 tons and upwards, less 2½ per cent cash discount. This step has been taken partly on account of an improvement in the Indian demand, and also because of the high prices of spelter, which is now £25 5*s.* per ton delivered Staffordshire.

STATUS OF PRODUCTION.

There is said to be no surplus production of lead in this district worth mentioning, and the outturn is called a diminishing one on account of foreign lead coming in.

WAGES OF MINERS.

The wages of lead miners in ordinary work, when paid by the week and working underground, range from 15 shillings ($3.65) to 18 shil-

lings ($4.38) per week. The underground shift is six to seven hours. Exceptionally, eight-hour shifts are worked, as on piecework, at so much per fathom for driving or sinking, or at so much per "bing" of 8 cwt. of ore raised, or in outside work as dressing ore, etc. On piecework 18 shillings ($4.38) to 21 shillings ($5.11) a week are made and in favorable contracts 28 shillings ($6.81) to 30 shillings ($7.30) a week are made.

These contracts or bargains, as they are called, are let for one or two months at so much per fathom or per bing of ore of 8 cwt. Sometimes in drifting 10 or 20 fathoms lengths of level will be let at so much per fathom.

FOREIGN LEAD AND ZINC.

The use of foreign lead and zinc is reported in this district; pig lead for converting, sheet zinc largely for building, pig zinc or spelter for brass foundries.

It is said that foreign zinc is mostly used, as it is cheaper than English, and that foreign lead and zinc are consumed in Yorkshire to a great extent.

A dealer and converter whom I have consulted estimates the proportion of lead and zinc consumed in Yorkshire for purposes of conversion in the following proportion as regards its source of origin: Yorkshire and other British and Irish mines, 25 per cent; foreign mines, 75 per cent. Pig lead and sheet lead are said to be the usual forms in which lead is brought into the district for manufacturing purposes, and the same may be said of zinc.

AMERICAN LEAD AND ZINC.

So far as my informant was aware, lead and zinc from the United States are not used here, and the same report applies to their manufacture.

Mr. Samuel Wolfe, of S. Wolfe & Sons, New Briggate, to whom I am indebted for some of the foregoing information, would undertake an agency for the introduction of American lead and zinc, provided they can compete with the market. He mentions a narrow margin—2½ per cent—as necessary to enable them to be handled.

Messrs. J. G. & T. Heaps, of North St. Leeds, have also authorized the mention of their firm name in this connection. This house occupies a leading place in the district with reference to lead and zinc. My thanks are due to this firm for assistance in my inquiry.

YORKSHIRE LEAD MINES.

Annexed is an extract from the opening lecture of the coal-mining department of the Yorkshire College, recently delivered by Prof. Arnold Lupton, at the beginning of the fourteenth session of that department,

taken from the Post of the 14th instant. Prof. Lupton is reported saying:

As a general rule lead mines in Yorkshire could not be worked below water level, and in coal mines great care was taken to keep out the water. This was possible in coal mines, because the coal measures contained strata of shale impervious to water. In the county of Flint was a notable example of mining in the carboniferous rocks. The Halkyn Mountain, nearly 1,000 feet high, sloped down to the sea. The mountain was of limestone, capped with millstone grit in some places; on the northeastern slope the coal measures came on and dipped down under the sea. There were rich mines of coal that would last five hundred years and more—a great storehouse of energy for the advancement of civilization. But in the limestone the carbon and hydrogen were all combined with lime and oxygen, and were, therefore, devoid of energy—an inert mass, formed of the skeletons and empty dwellings of the animal life that thronged the seas before the time of man; and, as if by some grim design, lead, the only metal which it contains in large quantities, is that metal whose most notorious use is to make bullets—lead come from the habitations of the dead to make more dead. But the lead mines of Halkyn, prosperous in former days, got deep, and were then ruined by the cost of pumping water. To overcome this difficulty a level had been driven from a valley 200 feet above the sea level into the heart of the mountain, nearly 4 miles in length. A volume of water ran from this level every twenty-four hours, which, if weighed, would balance 40,000 tons. Prosperity had now returned to Halkyn, and dividends of 100 per cent were paid by one of the mines. The levels were driven by rock drills, actuated by compressed air, this compressed air being also used to work a sawmill, a hammer, and a force pump. Many kinds of drills were used—the Beaumont, the Hirnant, the Minerva, the Rio Tinto, the Alimax, the Eclipse, the Shram, the Darlington, etc. The lecturer described some of these drills in detail. He also explained the mode of dressing the ore for the market. In mountainous or rugged districts the conveyance of minerals was often difficult; to overcome the difficulty a ropeway or aerial railway was used. Ropes stretched from post to post formed a succession of suspension bridges, by which rivers, ravines, roads, and fields could easily be crossed, grooved rollers could run along the fixed rope, and suspended from these rollers were large buckets holding about 10 cwt. of coal; the buckets were placed all along the rope about 20 yards apart; a hauling rope was dipped to all the buckets, which were just dragged along the suspended railway or ropeway. In some cases the cost of working these ropeways compared favorably with any other kind of way that could be made.

W. H. WIGFALL,
Consul.

LEEDS, *October 20, 1890.*

GIBRALTAR.

FOREIGN LEAD AND ZINC.

Lead and zinc are consumed here, but to a limited extent, probably not to exceed 60 tons of the former, and 20 tons of the latter annually, by plumbers, for a variety of purposes, chiefly for center gutters, tanks, pipes, boxes, down pipes, conductors, and also for soldering purposes. The lead is imported from Great Britain in sheets and costs about $5 per cwt. placed here.

The zinc also comes from England in sheets, measuring 8 feet in length and 5 feet in width, costing $6 to $9 per cwt.

AMERICAN LEAD AND ZINC.

I am not aware of any American lead or zinc having ever been imported here for sale, and, in view of the limited quantity required here annually, I do not see any favorable prospects for the present of an opening for their introduction and sale.

HORATIO I. SPRAGUE,
Consul.

GIBRALTAR, *September 13, 1893.*

CONTINENT OF AMERICA.

DOMINION OF CANADA.

FOREIGN LEAD AND ZINC.

About 4,000 tons of foreign lead are consumed in the Dominion of Canada annually, and about one-third of this is consumed in the province of Quebec.

This lead is imported from England and Spain via London, mostly from England, and is used in the manufacture of various articles, principally in the manufacture of lead pipe.

This lead is imported at a cost including freight charges of from $53.66 to $73 per ton of 2,240 pounds, and the reason assigned for using this to the exclusion of American lead is that it costs to purchase and import American lead one-third more than it does to purchase and import the lead now used.

I may add that I am informed that there are only about 300 tons of zinc consumed in the Dominion annually. This is almost wholly imported from Belgium and is used mostly for galvanizing purposes and in brass foundries.

There is, however, a small quantity of American spelters imported and consumed in this province. The reason assigned for the limited amount of the same so imported is that the cost, including freight charges, is about one-third more than the cost of that imported from Belgium, including freight charges.

CHAS. L. KNAPP,
Consul-General.

MONTREAL, *October 10, 1890.*

BRITISH COLUMBIA.

PRELIMINARY REMARKS.

I have interviewed Wm. F. McCullock, provincial government assayer, respecting the questions propounded in the circular. He is an intelligent man and an old citizen here. Furthermore, as a miner in 1864, and from that time to the present he has yearly spent much time

prospecting and has personally examined nearly every mining camp in the province. My information, so far as it goes, is therefore reliable.

Mr. McCullock complains that his countrymen are not efficient miners, and that they lack the push and energy of the Americans as shown by the latter in their enterprises in upper Montana and along the northern line in Washington. In fact he says the mines now being developed in Kootenay and central British Columbia are nearly all in the hands of Americans who have pushed across the border in their headlong rush for the precious ores.

DEPTHS OF MINES.

While zinc has been discovered in many places none of it is being mined at present. Argentiferous galena, mixed with other metals, is being mined to some extent. None of these mines have reached a depth of over 100 feet.

METAL IN ORES.

The per cent in the ore reaches from 50 to 65. Silver is mined in many places, but there is no footing up of aggregates that is available.

The yield ranges from 20 to 200 ounces to the ton. There are no smelter works in the province, though one is now being set up at Golden City, which is located at the point where the Canadian Pacific crosses the Rocky Mountains.

EXPORTS OF ORES.

The silver ore taken out in the Kootenay country is shipped to Butte, Mont., where it is smelted.

Mixed with lead and copper the value of the product averages about $300 per ton of ore.

STATUS OF PRODUCTION.

The production of ore is on the increase.

WAGES OF MINERS.

Miners get from $3 to $3.50 per day.

FOREIGN LEAD AND ZINC.

All the lead and zinc used in this province so far in the mechanic arts have been imported from Great Britain or the United States. They are largely used in plumber's goods, piping, etc.

Mining is in its infancy here, but it is quite certain that products will be varied, covering nearly all the well-known metals, and that the quantities are well nigh exhaustless.

LEVI W. MYERS,
Consul.

VICTORIA, *September 26, 1890.*

BROCKVILLE.

No lead or zinc is mined in this consular district. No lead goods are received here from any foreign country. All lead and zinc manufactures received here come from Montreal.

JAMES F. ELLIS,
Consul.

BROCKVILLE, *September 8, 1890.*

CHATHAM.

Lead or zinc is not mined or manufactured in this district.

Nearly all the lead and lead pipe and zinc used here is purchased in Toronto and Hamilton, Canada. Some had been purchased in Detroit, Mich., but since the new American tariff went into force the dealers say they have stopped buying there.

I would add that as to comparison between American and Canadian lead pipe, lead, and zinc the dealers here slightly favor American goods.

W. U. U. WEBSTER,
Commercial Agent.

CHATHAM, *November 1, 1890.*

COATICOOK.

Lead and zinc are used to a slight extent only, principally for protection near stoves, and furnished in this vicinity by Canadian dealers entirely, being preferred to American zinc on account of the lesser cost.

ALFRED W. STREET,
Consul.

COATICOOK, *October 6, 1890.*

GASPE BASIN.

There is no lead or zinc mining carried on in this consular district. There was a lead mine formerly worked at Little Gaspe, about 15 miles from this port. It did not pay, and was closed some twenty years ago. No lead or zinc used here in quantity other than in general country stores.

ALMA F. DICKSON,
Consul.

GASPE BASIN, *September 8, 1890.*

GUELPH.

There is nothing whatever in the nature of lead or zinc mining done in this consular district. The consumption of lead in the entire district is very small, probably not exceeding 20 tons all told. It is used principally in the shape of lead pipe and in plumbers work. Consumers are supplied entirely by Toronto and Montreal dealers. So far as can be ascertained the product is not imported in any form from the United States.

As to the zinc consumption, that too is exceedingly small, sheet zinc not exceeding 25 tons and spelter probably not over 2 tons. All sheet zinc used here is imported from Vieille Montaign, Belgium; spelter from Silesia. No United States zinc in use here notwithstanding there is no duty on it either in sheet, pig, or block form. I do not understand that this is due to any points of superiority of Vieille Montaign product over that produced in the United States, but rather to the fact that the producers of the latter do not meet foreign prices in either of the products mentioned.

LOTON S. HUNT,
Consul.

GUELPH, *October 27, 1890.*

KINGSTON.

DEPTHS OF MINES.

The "Frontenac Lead Mine," with its history, is all there is or has been of lead and zinc mining in the consular district of Kingston.

The mine is situated about 16 miles from Kingston, in the township of Loughborough. The principal lead-bearing vein is from 10 to 12 feet wide, richly charged with galena, and cutting the country rock at right angles.

On this vein two shafts have been sunk about half a mile apart. Shaft No. 1 has been sunk nearly 200 feet, with an adit of 450 feet, at a depth of 40 feet, and 18 and 28 fathoms levels along the vein and between its walls.

The western shaft or No. 2 has been sunk to about 30 feet, and the last ore raised from the bottom was a cubical mass of almost pure galena of about 200 pounds weight. The mine was originally opened in 1867.

In 1875 it was leased to an English company, who worked it until 1884, when it was abandoned and taken possession of by the original company. The financial management of the business by the English company is described as having been extravagant in the extreme.

The working of the mine was with antiquated machinery and methods unsuited to the country and laborers. The last five months that the

mine was worked it produced 486,552 pounds of galena and 254,376 pounds of lead.

FOREIGN LEAD AND ZINC.

Lead and zinc are used in this district for the same purposes, and I presume about the same quantities per capita as in the United States. They are at present purchased in Montreal; zinc imported from France and Germany, and lead from Great Britain.

AMERICAN LEAD AND ZINC.

To introduce lead and zinc here from the United States, the quality must be better, the price lower or some other little advantage given the purchaser.

M. H. TWITCHELL,
Consul.

KINGSTON, ONTARIO, *September 17, 1890.*

LONDON.

FOREIGN LEAD AND ZINC.

There are no lead mines in this district, and all lead used here is imported from Europe. I find that the city of London uses about 50 tons lead piping annually, and it is thought that at least 50 tons more are used in the city, viz: Sheet lead about 25 tons, and pig lead 25 tons.

Lead piping cost about 5 cents per pound; sheet, 4½ cents per pound; pig lead, 4 cents per pound in quantity. Zinc is used in sheet form, about 50 tons annually.

AMERICAN LEAD AND ZINC.

I do not know that I can suggest any method by which our trade here could be built up, but that usually adopted, viz, visiting the trade and if possible offering inducements that would turn the attention of dealers to the United States.

H. Z. LEONARD,
Commercial Agent.

LONDON, ONTARIO, *September 1, 1890.*

MONCTON.

There are no lead or zinc mines in my district. All the lead and zinc consumed are entirely foreign and used only in the ordinary forms. The consumption is small.

FOREIGN LEAD AND ZINC.

The lead is imported principally from Great Britain in the pig, or in rolls of about 500 pounds each, put up in matting or straw rope; 2½, 3, and 4 pounds to square foot mostly used. Cost at present time, 4 cents per pound laid down here.

The zinc is imported from Belgium in casks about 1 foot in diameter and 40 inches in height of hard-wood staves. Each cask contains about 500 pounds net in sheets 7 feet long and 3 feet wide, running from 10 pounds to 15 pounds to a sheet according to gauge. Only one gauge shipped in a cask. Cost now about 5¾ cents laid down here.

AMERICAN LEAD AND ZINC.

No American lead, zinc, or their manufactures are consumed in this district. The only reason of this is that the foreign article can be imported at a much lower figure. In order to introduce the American productions it would be necessary to reduce the prices in order to successfully compete with foreign countries.

The Sumner Company of this city, to whom I am indebted for the above information, are about the only importers of these metals in this district to any extent. Other consumers either purchase in small quantities, as required, from the said firm or from importers out of this district. I am unable to ascertain further details that might be of service to the Department or others interested.

JAS. S. BENEDICT,
Commercial Agent.

MONCTON, *September 19, 1890.*

QUEBEC.

Lead and zinc are not mined in this district, and very small quantities used in any form, not sufficient to be an object.

FREDERICK M. RYDER,
Consul.

QUEBEC, *October 1, 1890.*

TORONTO.

There are no lead or zinc mines worked in the Province of Ontario; there are lead mines, but they have never been developed.

FOREIGN LEAD AND ZINC.

Dry white lead up to within a few months past could be imported from the United States to compete with English and continental cor-

roders. By the recent increased price in the American market the lead buyers are forced on the English market. The present price of American pig lead is $5 per 100 pounds. Cost of transportation and duty would bring the figure to about $5.75 laid down in Canada, against cost of English, $3.75. This leaves a difference in favor of the English market of $2 per 100 pounds.

The lead is all imported in bars.

Zinc.—The Western States have sent a few carloads of spelter, principally for galvanizing purposes, to both the Toronto and Montreal markets, but an easier feeling in this article in Belgium has practically excluded American, although the difference is not very marked, as the American producers are making lower quotations for the Canadian market in order to compete with the Belgians if possible.

So long as there is a difference of $2 per 100 pounds in favor of the European market the Americans can not expect to compete in lead. If the United States market can meet the European market in zinc there is no reason why Canadians should not purchase at the nearest market.

CHARLES R. POPE,
Consul.

TORONTO, *November 15, 1890.*

WAUBAUSHENE.

There are no lead or zinc mines in my district, and neither are used except what is used in the form of Babbitt, which is manufactured at Port Hope and used about our mills in small quantities.

R. W. SOULE,
Commercial Agent.

WAUBAUSHENE, ONTARIO, *September 1, 1890.*

MEXICO.

Lead is found, mainly in the form of galena and in smaller quantities as carbonates, in many places in Mexico, and in enormous quantities at "Lomo de Toro," State of Hidalgo, in silver ores, and also in many other parts of the Republic.

DEPTH OF MINES.

The depth of lead mines varies. In the State of Coahuila ores are extracted from a depth of 500 feet. In the State of Mexico the lead mines are worked through shafts and tunnels about 300 feet from the surface.

METAL IN ORES.

No zinc ores are mined in Mexico for this metal, and only when accompanied with silver and gold are these ores of value, and then when the zinc exceeds 15 per cent. The ores are considered valueless on account of the difficulties of treatment.

It is doubtful whether high-grade zinc ores are to be found in Mexico, and heretofore all the zinc discovered has been associated with lead, copper, antimony, and other base metals, and in a very low proportion, never over 15 per cent.

There being no market in Mexico for any quantity of zinc no attention has been given to the mining of this metal.

METAL OBTAINED BY SMELTING.

The average per centum of metal in the ores of lead is about 25 per cent, and through the smelting process 80 per cent of this is obtained. The process preferred in the smelting is by the water-jacket furnace.

COST OF REDUCTION.

The cost of reduction of 2,000 pounds of ore into spelter is not known, and it is impossible to guess at it, being only known by the owners of different mines, presumably about $15.

VALUE OF ORE AND SPELTER.

The value of the ore per ton of 2,000 pounds at the mines also is difficult to state, as it varies so in each district that no exact figures can be given, but it is about 50 per cent of the assay value, the value being calculated according to the price of the New York market. Spelter has no price here.

EXPORTS OF ORES.

There is a large surplus of lead ores in Mexico which are exported to the United States, and the production is constantly increasing.

WAGES OF MINERS.

The wages of miners engaged in the mining of lead are from 75 cents to $1 per day.

FOREIGN LEAD AND ZINC.

Foreign lead, I am informed, is not used here, and but very little of zinc, which comes in the form of sheets into the country. The reason of there not being more lead imported is on account of the high tariff and freight rates imposed, and of zinc because there is no demand for it.

The lead is made into forms here suitable for use, as there is a great abundance of it, so it would seem a difficult matter for foreign manufacturers of lead to compete with the home industry in this part of Mexico.

RICHARD GUENTHER,
Consul-General.

MEXICO CITY, *October 25, 1890.*

Owing to the conditions of mining in this country it is not possible to answer the questions in the circular consecutively.

I know of no mining for zinc, either directly or indirectly. A few per cent is occasionally found in silver ores exported through here, but this is lost in smelting, and instead of being a component of value really reduces the value of the ore.

There is, so far as I know, no lead mining for lead alone. Lead is found with silver and the mining is primarily for the silver.

The silver-lead ores of Mexico, which have a chief value in silver, go in free as silver ores, even when they carry very heavy per cents of lead.

The exports from Mexico to the United States of the silver-lead ores were as follows:

	Value in U. S. coin.
Year ending June 30, 1889	$6,951,719
Year ending June 30, 1890	7,754,672
Month of July, 1890	680,164

From 90 to 97 per cent of the above was entered at El Paso, Eagle Pass, and Laredo.

In the above ores the lead exported free of duty to the United States in the ores was as follows, month of July, 1890:

	Pounds.
El Paso	2,512,825
Eagle Pass	326,149
Laredo	156,776
Total	2,995,750

On this estimate for July, 1890, the lead in the ores for the two years would be as follows: Year 1889, 30,000,000 pounds; year 1890, 34,000,000 pounds.

Besides the above there is a considerable export of argentiferous lead to the United States and to Europe for parting.

VALUE OF ORES.

It is running now about 3,000,000 pounds per month, but will fall off when smelters now building in Mexico commence work. Unless our smelters avail themselves of the bonded provisions of the new tariff bill this will almost entirely cease when the new tariff takes effect, plac-

ing a duty on the lead contents of ores. Even in this case the lead contents, if at all heavy, will have to be exported after smelting.

These ores run from 2 per cent to 50 per cent of lead and 8 ounces to 40 ounces of silver, and such as will pass our customs as silver ores are sold at a fixed rate off New York silver quotations and about 1½ cents per pound for 90 per cent of the lead contents for all the lead in the ore.

If the pigs carry too much silver they are subject to a minting charge, on export, and classed as silver lead bullion.

If the silver does not go too high it passes as pig lead and is invoiced as bar lead bearing silver, and generally sent in bond through the United States to Europe.

The exports of these two from Mexico, all or nearly all of which went to Europe, for the year ending June 30, 1889, were as follows:

Bar lead bearing silver.

From and to.	Quantity.	Value.
From—	*Kilos.*	
Ciudad Juarez	230,523	$60,735
Ciudad Porfirio Diaz	3,432,620	358,226
Laredo	529,028	47,729
Mazatlan	13,089	1,047
Total	4,205,260	467,737
To—		
Germany	13,089	1,047
United States	4,192,171	466,690
Total	4,205,260	467,737

Silver-lead bullion.

From and to.	Value.
From—	
Ciudad Juarez	950
Guaymas	470
Mazatlan	19,268
Total	19,788

All to the United States.

Total lead value, $487,525; total weight, 4,205,260 kilograms.

The foregoing will show the status of the lead product in the past. At present matters are in transition state. Smelters are being erected, several are nearly ready for business, and in a year from now I can report as to results.

The lead output of Mexico will be greatly increased, but the export in the ore to the United States for reduction will be greatly diminished.

Only ores which run low per cents of lead and which are specially valuable as a bath can stand 1½ cents per pound on the lead in the ores fixed by the new tariff. Advantage may be taken of the bonding provisions of the new tariff to import such ores and export the base metal

product, but the 3,000,000 pounds of lead per month now going in free will be shut out almost wholly, as far as our own local market is concerned. The reduction works now being erected in Mexico will largely produce bar lead bearing silver and, to a lesser amount, silver bullion.

I have stated that under the present Mexican tariff the bar lead-bearing silver, if it does not carry too much silver, is free of export duty, but if it carries too much the silver is subject to the mint tax on exportation.

This will enable the new reduction companies, if they choose, to put all their silver into these bars and export to Europe either direct or in transit through the United States. This saves expenses in shipping and leaves the lead in Europe where it has a value instead of here where, heretofore, it was worthless.

The new industries now springing up here in Mexico will use a considerable amount of pig lead in manufactures, such as piping, etc.

The wages of miners vary from 50 cents to $1.50 per diem. Many work on shares, and while the amount varies with the ore and custom of payment the above will fairly give the highest and lowest usual wage.

Zinc is imported only in very small quantities. More lead is imported but the value is very small. Not yet having got later data prepared I can only give the following from Mr. Stávoli's report with the following comment: Probably four-fifths of these imports were European goods in bond through the United States to Mexico, where they are entered as from the United States. The values are probably Mexican plaza values, in Mexican coin.

Imports into Mexico (from United States), year ending June 30, 1888.

Description.	Quantity.	Value.
	Kilos.	
Zinc, manufactures of, of all classes	5,289	$1,468
Plaque, manufactures of	223	224
White metal, manufactures of	5,964	3,927
Plaque or German silver, in sheets	208	257
Lead in pigs, bars, shot, or sheets	57,166	6,831
Zinc, laminated	9,817	1,177
Total	78,762	13,889

There is very little consumption of American lead and zinc and their manufactures in this district. The demand is very small at best.

WARNER P. SUTTON,
Consul-General.

NUEVO LAREDO, *September 26, 1890.*

CHIHUAHUA.

In this consular district there is absolutely no lead or zinc mining. The foreign lead and zinc consumed in the manufactures here is of so small a quantity that the figures would sink into infinitesimal insignificance. There is virtually no necessity for the introduction of lead and zinc into this country, as those metals exist in abundance. There are no manufactures in this district requiring the consumption of either foreign or native lead or zinc.

WM. HEIMKE,
Vice-Consul.

CHIHUAHUA, *October 14, 1890.*

GUAYMAS.

No mines of zinc or lead are worked as lead or zinc mines in this consular district, the lead produced being found mixed with the silver ores. American zinc and lead and their manufactures are used to a limited extent, and also lead and zinc from Europe, but the quantities are not such as to figure as a leading commercial article.

A. WILLARD,
Consul.

GUAYMAS, *September 9, 1890.*

MATAMORAS.

There are no lead or zinc mines in this consular district. We have no manufactures of these articles here and the consumption, in insignificant quantities, is confined to the small needs of local artisans.

JOHN F. VALLS,
Consul.

MATAMORAS, *September 6, 1890.*

NOGALES.

There is no exclusive lead or zinc mining in this consular district. The only lead produced is contained in the ores (silver and gold) which are shipped through this port into the United States, and for these amounts I refer you to my report for the six months ending December 31, 1889, which shows an average of about 100,000 pounds per month.

No lead or zinc is consumed in this consular district.

DELOS H. SMITH,
Consul.

NOGALES, *October 24, 1890.*

PIEDRAS NEGRAS.

There are in Mexico no zinc mines, or mines of zinc in such combination with the ores of other metals as to have a commercial value, hence this report will concern lead solely.

In Mexico lead invariably is found in combination with ores of silver. Mines are increasing in depth with development. Tendency of improved mining is towards increased depth.

As a result of calculations made from returns of over 20,000 tons of silver lead ores exported to the United States from this port the average per centum of lead per ton was 35 per cent.

Average per centum of metal obtained by smelting process ranges from 85 to 92 per cent.

The process preferred is smelting in water-jacket furnaces of from 20 to 40 tons capacity of charge. This charge consists of coke, ore, lime, iron, and silica, the proportions varying to meet the requirements of the ore.

Mexico has a very large surplusage of lead. As there are no manufactures of lead in the Republic it is exported to the United States in bond as crude ores to be smelted, and to Europe as silver-lead bullion.

For fiscal year ended June 30, 1890, there was exported to Europe from this port 9,890,067 pounds of silver-lead bullion.

The production of ores is largely and markedly increasing.

The wages of miners is from $1 to $1.50 per day.

Foreign lead is not consumed in this district to any appreciable extent.

AMERICAN LEAD MANUFACTURES.

There is no market in Mexico for American lead, but for the manufactures of lead there is a chance to increase the present trade and largely so in paints, common and fancy, in the composition of which white lead so largely enters. Depots or sales rooms should be established in the larger cities; agents should have a full knowledge of Spanish and of the commercial customs of Mexico; they should be able to quote through freight rates, customs duties, frontier commission charges, gross weights of packages, and, in fact, be as thoroughly wide-awake and informed on all points connected with their line of trade as are the agents of the German, French, and English commercial houses with whom they must compete. The trade in other manufactures of lead is very limited.

EUGENE O. FECHÉT,
Consul.

PIEDRAS NEGRAS, *October 14, 1890.*

TUXPAN.

Neither lead nor zinc is produced or exported from this section of country or port.

Lead and zinc are consumed here in very limited quantities, consisting of sheet and pipe lead, and zinc in sheets, imported from the United States.

JOHN DRAYTON,
Consul.

TUXPAN, *September 16, 1890.*

SOUTH AMERICA.

ARGENTINE REPUBLIC.

LEAD AND ZINC MINING.

In the far interior of the country, since the days of the Spanish conquerors, there have been spasmodic efforts to develop the mining possibilities of this part of South America. Millions of dollars have again and again been sunk in such undertakings; and millions more are now invested in this industry in the several interior provinces. Under the Spanish vice-royalty the extract of the precious metals was no inconsiderable item of the royal revenues. Of late years the returns upon the capital invested have been almost next to nothing at all.

The search, however, was then and is now for gold and silver; and scarcely any attention has ever thus far been paid to any of the baser metals. That there are lead and zinc ores in the Argentine Republic is a well-assured fact; but no efforts have ever been made to develop any mines of those metals, except as they were in juxtaposition to or a part of those of gold and silver.

What the future may discover in regard to the mining of the country remains to be seen, but up to the present time there has been no scientific survey of the different provinces with a view to finding out the exact situation, class, quality, and value of any of the mines of the Argentine Republic, whether of the precious or the baser metals. While, however, there are in some of the provinces mills and smelting works for the reduction of gold and silver ores, nothing of this sort has yet been attempted with reference to either zinc or lead. The lead produced is from the argentiferous ore.

The custom-house returns show that in 1888, 124 tons of lead mineral was exported; and in 1889, 110 tons; but of zinc it does not appear that any at all has ever been exported from the country.

FOREIGN LEAD AND ZINC.

I have, however, to inform you in response to the second portion of your circular that foreign lead and zinc and the manufactures of these metals are imported in no inconsiderable quantities in this country.

The amount of imported zinc, unworked, for the year 1889, was 2,782,903 kilograms, valued at $235,747. It came from the following countries:

From—	Amount.	Value.
	Kilos.	
Germany	160,480	$14,790
Belgium	1,977,067	173,251
France	3,636	364
Holland	132,844	9,343
Great Britain	374,300	28,545
Uruguay	106,855	7,362
Not named	23,711	1,692
Total	2,782,903	235,347

The imports of articles manufactured from zinc for 1889 only reached to $35,432, of which the greater portion came from Belgium and Great Britain. Only $73 worth of such articles were imported from the United States.

The amount of lead, unmanufactured, which was imported into this country in 1889 was 1,829,865 kilograms, valued at $160,708. It was imported from the following countries:

From—	Amount.	Value.
	Kilos.	
Belgium	2,544	$207
Spain	970	68
France	607,573	60,212
Italy	319,170	22,398
Great Britain	898,991	77,778
Not named	617	45
Total	1,829,865	160,708

The imports of articles manufactured from lead amounted to $240,501, of which $115,168 were from Great Britain, $54,476 from France, $38,454 from Germany, and $20,742 from Belgium. The amount contributed by the United States was valued at $753.

The returns for 1890 are yet, of course, incomplete, but for the nine months ending September 30 the imports of zinc unworked were 800,780 kilograms, valued at $72,369; of zinc, manufactured, the imports were valued at $9,143. For the same time the imports of lead, unmanufactured, were 4,614,189 kilograms, valued at $325,419, while the manufactures of lead were valued at $147,124.

AMERICAN TRADE, LEAD AND ZINC.

As will be seen, the share of the United States in the zinc and lead trade of the Argentine Republic is yet very small. I presume the reason for this has been that heretofore crude lead and zinc could be obtained at cheaper rates or on better terms in European countries than they can be put down here from the United States, owing to their superior transportation facilities by steamer.

However this may be, I would suggest, as the best method of introducing our manufactures of lead and zinc, that our merchants either establish agencies here or make terms with established houses for keeping our American goods in stock.

E. L. BAKER,
Consul.

BUENOS AYRES, *November 23, 1890.*

BRAZIL.

BAHIA.

Both lead and zinc are said to be products of this State, but to what extent I am unable to ascertain. In fact it will not be known until the mines are developed.

FOREIGN LEAD AND ZINC.

Lead and zinc are imported, but to a very limited extent.

In 1889 the value of the lead imports manufactured and otherwise, according to the custom-house figures, was about $14,633.

The lead in bars was chiefly brought from Germany, while England furnished that in the form of sheets as well as the lead pipes used as water pipes. From the United States the imports were of no consequence.

From the same source I find the value of the zinc imported in its various forms was, during the same period, only 8,122 milreis—about $4,061. England, France, and Germany each furnished about the same amount. The figures give but 26 kilograms imported from the United States.

It may be seen from these figures that the value of the lead and zinc imported is, so to speak, next to nothing. At least the business in it is so small it would be neither advantageous nor profitable for our manufacturers to engage in it, unless there is a prospect of its increase. But there seems no great demand for articles manufactured from either material.

AMERICAN LEAD AND ZINC.

If our manufacturers desire to make an effort to build up the business, the chief thing, as I have taken occasion to say in former

dispatches, is to establish a sample house here and have their wares under the eye of those wishing to purchase.

This method of building up the trade not only applies to lead and zinc and the manufactures of the same, but to all imports in which we have not already the bulk of the business. Of the different lines of goods or merchandise in general coming to this port from foreign countries, the United States manufacturers control the trade of three, viz, kerosene oil, lard, and blue drills. The flour trade was formerly under the control of our manufacturers also, but it remains with them no longer. For obvious reasons it has passed from them.

DAVID N. BURKE,
Consul.

BAHIA, *December 5, 1890.*

PARA.

There is no lead or zinc mining in the Amazon Valley.

There may be ores in the upper valley in the foothills of the Andes, in Peru, Bolivia, or Venezuela which are reached by the tributaries of the Amazon, and it is generally reported that this country is rich in all the ores, even in gold.

There does not seem to be any way to procure data here as to the consumption of lead and zinc; whatever is used comes from Europe.

Great quantities of tin plates are used here in preparing cases for the packing of goods, which is rendered necessary by the pest of ants which infest the country and destroy all food products not so protected

JOSEPH O. KERBEY,
Consul.

PARA, *October 10, 1890.*

RIO GRANDE DO SUL.

There are no zinc or lead mines in this consular district.

FOREIGN LEAD AND ZINC.

Imports.—In regard to the amount of foreign lead and zinc consumed in this district the imports at Rio Grande do Sul and Porto Allegre will show about all that is consumed in the State.

In reply to my inquiries on the subject Consular Agent Edwards at Porto Allegre, writes:

I have to report that there are no mines in this district, nor are the metals known to exist in any quantity. There is a small trade in zinc in sheets from Belgium and pig lead from England, but it is quite trifling. American lead and zinc are not known here and the only way to supplant the European metals is to undersell them.

At the port of Rio Grande do Sul the imports in these metals are also small.

There were imported during the year 1889, 17,992 kilograms, officially valued at $1,952.53, the official valuation averaging about 50 per cent of the invoice valuation.

Of zinc and its manufactures there were imported during the same period 7,321 kilograms, officially valued at $848.25.

Great Britain furnished the bulk of these metals, while the United States furnished none.

The item "lead in manufactures" does not include white lead. Two of the principal consumers of lead pipe here are the "Hydraulica Rio Grandeuse," or city water works, and the gas company. The gas companies of Rio Grande do Sul, Pelotas, and Porto Allegre, the three principal cities of the State, are under one and the same management.

AMERICAN LEAD AND ZINC.

In answer to the question as to the best methods of introducing American lead and zinc, if anything further needs be said in addition to what Mr. Edwards suggests as above quoted, I should say that if reports from other parts of South America are sufficient to invite the manufacturers of and dealers in these metals in the United States to make a serious effort for the trade, they must do as England and Germany do, send out competent salesmen equipped with a knowledge of the Portuguese and Spanish languages, at least with a knowledge of the latter, which may possibly serve in lieu of the former here in Brazil. It must also be borne in mind that besides the ordinary difficulties of opening up a new trade, these salesmen will encounter the additional obstacle of finding few or no houses owned or managed by North Americans. The necessity, therefore, of being able to sell as low, if not lower, than their rivals from other countries, with houses of their own nationality, and an established trade already here, is sufficiently obvious.

Circulars and price lists printed in the Spanish and Portuguese languages will be of service in connection with bright, pushing salesmen, but of themselves will not accomplish much.

CHARLES NEGLEY,
Consul.

RIO GRANDE DO SUL, *October 31, 1891.*

CHILE.

COQUIMBO.

There are no lead or zinc mines in this province. Sometimes lead or zinc are found in conjunction with copper and silver ores when they prove detrimental to the smelting of the latter. Lead and zinc are not quoted as a marketable article in this province.

J. GRIERSON,
Consul.

COQUIMBO, *October 20, 1890.*

IQUIQUE.

In this consular district there are no lead or zinc mines.

FOREIGN LEAD AND ZINC.

Foreign lead and zinc have a limited consumption in this district; lead, in the form of piping, and to a small extent in sheets. Zinc is used principally in the form of sheets. By far the greatest part of the lead and zinc here consumed is imported from England and the rest from Germany.

AMERICAN LEAD AND ZINC.

Very little American lead and zinc is consumed in this district. As to the best method of introducing American lead and zinc, or of enlarging the trade in these articles, I can only say that it is the same as that necessary to promote trade in every branch of American industry, viz, reduced freights, frequent steam communication with home ports, direct banking facilities, and better accommodations in the way of credits.

European merchants are far more liberal in this respect than our own. The former give ninety days' or six months' credit, or, at least, are satisfied if their accounts are paid on receipt of the bills of lading. The American merchant, on the other hand, requires payment to be made in advance, at least with all new customers, however well recommended they may be.

The South American trade is worth striving for. American products are highly esteemed, as, for instance, machinery for mining, and agricultural purposes, carpenters' tools, cotton fabrics, etc., but, for the reasons already given, they cost too much when put upon the market, and preference is given to the European article, which is cheaper and really less desirable.

With the opening of the Nicaraguan canal, the current of American trade will set in strongly to this coast; but is it wise to wait until the

completion of that great work? English, French, and German products will also come over that great highway, and their competition with American products will continue to be formidable and greatly to our detriment if, by lack of enterprise and wise forethought, we fail to establish a firm basis of trade, and without further delay, with the countries on this coast.

J. W. MERRIAM,
Consul.

October 14, 1890.

COLOMBIA.

PANAMA.

There are no mines of lead or zinc within the limits of my consular district, so far as I can learn from well informed Colombians. The consumption of lead and zinc in this district is so insignificant as not to be worthy of mention.

Small quantities of lead and zinc paints are consumed here. The best manner of enlarging the trade is for manufacturers to come here in person to study the market and find suitable agents to push the sale of their goods.

THOMAS ADAMSON,
Consul-General.

PANAMA, *September 13, 1890.*

ECUADOR.

There are no lead or zinc mines developed in Ecuador, and while the consumption of lead and zinc is thought to be considerable, it is impossible to obtain the information as to the amount.

Lead is imported in bars and zinc in sheets, very little, if any, coming from the United States.

To compete with European cost it would be necessary to transport per sailing vessels only.

The price of lead delivered here is: Sheets, $4.87; bars, $4.64; and that of zinc, $6, United States gold, per cwt., with exchange of 19 per cent added.

WILLIAM B. SORSBY,
Consul-General.

GUAYAQUIL, *September 20, 1890.*

URUGUAY.

FOREIGN LEAD AND ZINC.

The importation of lead and zinc into Uruguay for the years 1887 and 1888, the latest figures obtainable, quantity, value, and country from which supplied being given, was as follows:

Whence imported.	1887.		1888.	
	Quantity.	Value.	Quantity.	Value.
Lead.	*Kilos.*		*Kilos.*	
England	58,962	$4,978	154,721	$11,934
Italy	15,299	1,147	.....	.....
Chile	4,358	327	.....	.....
Argentine Republic	2,170	163	458	34
Ports not mentioned	3,227	297	2,061	155
Total	.....	6,907	.....	12,123
Zinc.				
Belgium	113,645	10,257	120,060	11,346
Germany	39,680	3,571	65,682	5,911
England	18,879	1,795	33,786	3,041
Argentine Republic	11,964	1,077	3,488	313
United States of America	.....	.....	530	48
Ports not mentioned	71,408	6,438	8,726	785
Total	.....	23,138	.....	21,444

The above table shows that England furnishes most of the lead consumed in this country and Belgium is the source of supply of the largest quantity of zinc. In 1888 a little zinc is accredited to the United States, but no lead for either year appears in the Government returns, charged to our country. A small quantity may have come from the United States, covered by the heading "ports not mentioned," but the whole amount under that elastic title being so small, the amount, if any, received from the United States must likewise have been very inconsiderable.

All lead and zinc consumed here are imported. There are no mines of either ore operated in the country. I can not ascertain that any concerted and intelligent effort has been made, either through Governmental or private initiative, to discover possible sources of supply within the borders of Uruguay. This is probably, however, not likely to be in any degree a mining country and we may, therefore, expect to find it an importer of lead and zinc for all time to come.

F. D. HILL,
Consul.

MONTEVIDEO, *November 4, 1890.*

VENEZUELA.

LA GUAYRA.

No lead or zinc mines are known to exist in this consular district.

FOREIGN LEAD AND ZINC.

Foreign lead and zinc are used here in very small quantities for soldering, packing, etc. There is no class of manufactures in which their use, to any considerable extent, can be encouraged. Lead water pipes were formerly imported, but these have been almost entirely supplanted by iron piping.

AMERICAN LEAD AND ZINC.

American lead and zinc and their manufactures are introduced in inconsiderable amounts, the small supplies needed being usually ordered from England and Belgium. The consumption of these articles is so limited that it would be difficult to offer any intelligent suggestion in reference to enlarging the trade.

WINFIELD S. BIRD,
Consul.

LA GUAYRA, *September 27, 1890.*

MARACAIBO.

FOREIGN LEAD AND ZINC.

There exist no mines of either metal in this consular district.

Lead, in bars and sheets, is introduced from Europe to the amount of about 4,000 pounds annually, and of zinc, in a metallic state, about 1,000 pounds. There are also imported from Europe about 500 quintals of shot and 20 quintals of zinc paint.

AMERICAN LEAD AND ZINC.

Lead and zinc in a metallic state (bars, sheets, shot, etc.), are not introduced into this consular district from the United States, as the dealers in these articles unite in saying that the prices in Europe are so much lower that it does not pay to import anything of this character from the United States.

Lead paint is introduced from New York to the amount of about 600 quintals per annum, but zinc in any form is not received from the United States.

In this branch of trade, as in nearly all others in which our people are interested, I can only recommend personal examination of this market by means of competent agents.

Other nations send to South America an army of commercial travelers who place themselves in direct contact with local merchants, and as they invariably speak Spanish sufficiently well to do away with the necessity of an interpreter they have an immense advantage over the American houses who content themselves with sending circulars, these being frequently in English only, which are quietly laid aside and forgotten.

I can only repeat, therefore, the recommendations made in various commercial reports, the chief of these being personal representation by competent agents who speak the language sufficiently and who carry their samples for inspection, and the very few American houses who have already adopted this system, have invariably met with the most gratifying results.

E. H. PLUMACHER,
Consul.

MARACAIBO, *October 31, 1890.*

WEST INDIES.

BRITISH WEST INDIES.

BAHAMAS.

There is no mining of lead or zinc in this colony, and no such ores are known to exist in the Bahamas.

FOREIGN LEAD AND ZINC.

Lead and zinc are used in small quantities in this colony. They are imported and sold in sheets. White-lead and white-zinc paints, ground in oil, are also in use.

Sheet lead, weighing 4 pounds per square foot, is imported from England, and costs, originally, $3.60 per 112 pounds. It is not often imported from the United States, because it costs in New York about $5.75 per 100 pounds, or very much more than in London.

Sheet zinc is imported from England, of No. 12 gauge, in sheets 8 by 3 feet in size, and costs about $6.80 per 112 pounds. It is also imported occasionally from the United States, but costs about $7 per 100 pounds.

The lead and zinc paints, ground in oil, nearly all come from England, costing from $3.50 to $5 per 112 pounds. Corresponding qualities of American manufacture cost about 25 per cent advance on these prices.

As to the value and quantity of these goods imported I can give no actual figures, for the reason that they are not entered for duty separately at the custom-house, but are classed with a large variety of merchandise which is known as "articles paying an ad valorem duty of 20

per centum." After consulting with merchants who handle these goods I think it can be safely stated that the entire importation of lead and zinc in sheets does not exceed about 3,000 pounds per annum, whilst about 40,000 pounds of lead and zinc paints, ground in oil, are imported yearly. The money value of all of these goods would probably range between $2,000 and $3,000 a year, the trade being very steady.

AMERICAN LEAD AND ZINC.

The trade in these goods with the United States is already established but is not increasing. No fault is found with American products, as our lead, zinc, and paints give good satisfaction. The best way, in fact the only way, to enlarge our trade in such articles with this colony is to furnish dealers with the same quality of goods at English prices. The moment Bahama dealers can buy these goods in New York at London figures that moment they will transfer their trade to our manufacturers. The freight from London to Nassau by steamer is only $5 per ton greater than the freight from New York, and this slight difference is overbalanced by the fact that long credits are readily obtained in London by Bahama merchants.

The United States already supplies 80 per cent of the merchandise imported into this colony, and it has been brought about by furnishing goods that will compete in price and quality with English articles. In exactly the same way can our manufacturers of lead, zinc, and their products control the trade in their goods in the Bahamas.

The greater portion of the importations are made through general agents, both in England and in the United States, who charge for their services a commission of from 2½ to 5 per cent. Two firms in New York, Messrs. F. T. Montell & Sons, 63 Pine street, and Messrs. H. P. Dyer & Co., 87 Front street, handle the bulk of the importations from the United States to the Bahamas, and I would advise our manufacturers to introduce their goods to and correspond with these general agents.

THOS. J. MCLAIN, JR.
Consul.

NASSAU, N. P., *September 18, 1890.*

BERMUDA.

FOREIGN LEAD AND ZINC.

In reply to the first ten questions of the above circular I would say that there are no mines of any description in these islands, and no mining whatever is carried on.

Zinc and lead are used here in very small quantities, shipped here from England in the form of small sheets or plates. It is used only for roofing or plumbing purposes, and the entire yearly import will not exceed $500 in value.

AMERICAN LEAD AND ZINC.

American lead and zinc are not used here, as the importers claim they can get the English cheaper. The only method of introducing American lead and zinc would be to reduce the price thereof to the level or below that of the British article.

HENRY W. BECKWITH,
Consul.

HAMILTON, BERMUDA, *October 16, 1890.*

JAMAICA.

Lead or zinc is not mined on this island, and custom-house reports show 27,169 pounds lead (pig, rolled, or sheet) imported in 1889. This was all received from the United Kingdom. None appears to come from the United States unless under the head of painters' colors and materials.

W. R. ESTES,
Consul.

KINGSTON, JAMAICA, *October 3, 1890.*

TRINIDAD.

FOREIGN LEAD AND ZINC.

There is no lead or zinc mining in this consular district, and the importations of lead and zinc are very small. It is estimated that not more than a ton of zinc in unmanufactured or sheet form is imported here annually. It comes usually in sheets, and is used for lining small vessels, ice boxes, and miscellaneous purposes, also sheets perforated so as to admit of ventilation used for meat safes and screens are imported to some extent.

It is estimated that about 150 tons of lead in all its forms are imported here annually. It comes principally in the form of water pipes and in sheets for guttering and other purposes.

A large quantity of galvanized iron in sheets for roofing houses is imported here from the United Kingdom. It costs usually about £18 a ton laid down here.

AMERICAN LEAD AND ZINC.

Very little, if indeed any, zinc or lead, or manufactures thereof, are imported here from the United States. I am unable to satisfactorily

account for this, except that it is alleged that these articles are obtained from England at more favorable prices. They are entered at the custom-house under the general term hardware, and pay an ad valorem duty of 4 per cent. I would suggest that our manufacturers and producers of lead and zinc correspond as to the details of their respective products with Messrs. F. Urich & Son, Gerold & Sherer, Hunter & Co., and George Fitzwilliam & Co., who are the principal dealers in lead and zinc articles at Port-of-Spain.

WM. P. PIERCE,
Consul.

TRINIDAD, *November 10, 1890.*

FRENCH WEST INDIES.

MARTINIQUE.

FOREIGN LEAD AND ZINC.

Neither lead nor zinc is mined or manufactured in this consular district.

Foreign lead and zinc are used here mainly in the form of pipes and sheets—lead in pipes for conveying water and sheets for the usual purposes, and they are imported from Marseilles.

The lead (pipes and sheets) costs, free on board, $3.20 per cwt. of 112 pounds, freight averaging $5 per ton. The usual dimensions for pipes are 10 to 20 meters long and from 10 to 70 milimeters inside diameter. It is put up in rolls protected by heavy straw matting.

Lead in sheets of about 1 meter wide and 5 meters long, varying in thickness from 1 to 4 millimeters.

Zinc in sheets of 80 centimeters wide and 2 meters long, varying in thickness from Nos. 9 to 14, used generally for guttering and rain conduit pipes. Also in sheets of 35 centimeters wide and 1 meter 40 centimeters long, thickness No. 10 to No. 17, used for sheathing small vessels and boats. Duties, 5 to 7 per cent ad valorem.

The imports are chiefly from Havre, in which vicinity is the celebrated manufactory of "Vielle Montagne." The cost, free on board, is $7 per cwt. of 112 pounds. The rate of freight varies with the season, averaging $5 per ton from either port named.

AMERICAN LEAD AND ZINC.

American lead and zinc are little or not at all used in this district. I am strongly of the opinion that the same rule would apply to manufacturers of aforementioned articles that does to all others. That is, if American manufacturers desire to reap "the harvest that is ripe for

the sickle," they must pursue the same policy as the merchants of England, France, and Germany pursue, viz, send capable solicitors, speaking the language of the "peoples" (French is understood in all the islands), with samples and prices free on board, passing to and fro continually to see the wants of the dealers, and willing to fill any and all orders. The result would most certainly surprise them; for there can be no question but American manufactures of utility and beauty are sought for in these islands and preferred to all others by those who have them in use.

ALFRED B. KEEVIL,
Consul.

MARTINIQUE, *November 27, 1890.*

CONTINENT OF ASIA.

ASIA MINOR.

ASIATIC TURKEY.

SIVAS.

The only worked lead mine of importance in this district is that at Lidjessy, operated by the Asia Minor Mining Company. From information kindly furnished by the superintendent, Mr. W. H. Twelvetrees, the following replies, as relates to this mine, are given to the questions asked in the Department's Lead and Zinc Mining Circular.

DEPTHS OF MINES.

Lead and zinc mines at present are no deeper than nine years ago, as the mining is carried on by day levels driven into the hill all the way down to about 1,800 feet from the crown.

METAL IN ORES.

The ore stuff as raised averages some 9 or 10 per cent lead, but this is concentrated by washing to 70 or 75 per cent.

METALS OBTAINED BY SMELTERS.

Ores at this mine are not smelted here, but are dressed by jigging and buddling. By this means 80 to 84 per cent of the assay value is obtained.

SMELTING PROCESS.

The ores are water dressed, not smelted, owing to lack of available fuel.

COST OF REDUCTIONS.

The cost of concentrating 10 tons of ore stuff to 1 ton of 75 per cent ore is about $6.75 a ton, including wear and tear of machinery.

VALUE OF ORES AND SPELTER.

The ore has absolutely no value in Turkey, for there are no smelting works to reduce it and make it available for the market.

IMPORTS AND EXPORTS OF ORES.

The Lidjessy mines are the only producers of lead and blende in this district. The ore is all exported to Swansea, in Wales, and sold there to the smelters.

STATUS OF PRODUCTION.

The production is decreasing, as the ground which has been opened up is being exhausted, and the new discoveries are not yet sufficient to replace old works.

WAGES OF MINERS.

Miners earn from 7 to 8 piasters (31 to 35 cents) per day on contract work.

FOREIGN LEAD AND ZINC.

Foreign lead and zinc are consumed in this district to a large extent, but the figures as to amounts are not available. Lead is sold in the forms of tubes and pig at 2½, 3, and 4 piasters* the oka (2¾ pounds), and zinc in sheets at 5 piasters the oka.

AMERICAN LEAD AND ZINC.

Lead and zinc ore are imported from Marseilles, France. America doubtless too distant to hope to compete with French smelters.

H. M. JEWETT,
Consul.

SIVAS, *December 12, 1890.*

PALESTINE.

As there exists no mining of lead or zinc in this consular district I am obliged in this report to confine myself to the last two of the interrogatories and suggestions conveyed in the circular of the Department.

FOREIGN LEAD AND ZINC.

Foreign lead in blocks is imported at Jaffa, chiefly coming from France, to the value of from $300 to $500 per annum, and is sold here at 4 cents per pound.

Zinc is imported here exclusively from Belgium, in sheets 2 meters long by 1 meter in breadth, and sells here for 8 cents per pound. The annual importation of zinc amounts to from $9,000 to $10,000.

Both articles are principally used by *tinsmiths*, employed by them for their various industrial purposes. Zinc especially is employed for pipes, gutters, and also for roofing.

* The piaster=4·4 cwts.

AMERICAN LEAD AND ZINC.

American lead and zinc and their manufactures are not consumed in this consular district.

The first thing to do in order to introduce American lead and zinc would be to distribute price lists and estimates of cost in full to the merchants and dealers in Jerusalem and Jaffa, enabling them to judge of the advantages of the American articles. This might be followed up by the visits of special agents exhibiting samples of the goods or the establishment of agents in the country should the demand for the articles be considered of sufficient importance.

HENRY GILLMAN,
Consul.

JERUSALEM, *October 3, 1890.*

SYRIA.

FOREIGN LEAD.

Foreign lead is consumed throughout this consular district in comparatively small quantities under five radical forms, as it will be observed from the following remarks: The amount of pig lead consumed annually is estimated to be about 20,000 kilograms, or 44,000 pounds, the average wholesale price of which is $6.95 per 100 kilograms or 220 pounds. Pig-lead pieces which are imported from France and Belgium into this market are usually 29 inches long 6 inches wide and 3 inches thick. Not more than 1,000 kilograms of lead sheets are consumed every year. Lead sheets in the Beirut market are worth at present $7.04 per 100 kilograms. These sheets are usually imported from France and Belgium in pieces 47½ inches long by 23¾ inches wide and about one-tenth of an inch thick.

The annual consumption of lead pipes is considered to be about 15,000 kilograms, or 33,000 pounds. The price per 100 kilograms has fluctuated during the last twelve months between $6.76 and $7.72. The usual diameter of lead pipes imported here from France, Belgium, and England varies from one-quarter of an inch to 2 inches. Lead pipes are generally used for conducting water from the main iron pipes in the streets into the interior of houses. The use of lead pipes has somewhat increased since the recent introduction of gaslight into the city of Beirut.

The annual imports of lead rods amount to nearly 25,000 kilograms, or 55,000 pounds, average price of which per 100 kilograms is $7.06. The size in which lead rods are imported is 23¾ inches long by 2 inches wide and one-tenth of an inch thick. These rods are the produce of French manufactures and find better demand than pig lead.

Foreign lead is largely used under the form of small shot and bullets for shooting purposes. The annual imports of these two articles may be approximately estimated at about 100,000 kilos or 220,000 pounds. The average price per 100 kilos is $7.14. Small shot imported into this market are those marked Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and the bullets Nos. 0, 00, 000, up to 00000000. Small shot and bullets are to a great extent imported from France and partly from Italy.

FOREIGN ZINC.

The Beirut district consumes annually about 300 barrels of zinc, each barrel containing 250 kilos or 550 pounds. The plates are generally 79 inches in length and 39½ inches in width; the numbers of thickness in vogue vary from 8 to 14. No. 8 is 0·400 millimeter thick and No. 14 is 0·820 millimeter. The average cost of zinc in the Beirut market is at present $13.12 per 100 kilos. Belgium is the main country from which zinc is imported into this part of the Turkish Empire.

AMERICAN LEAD AND ZINC.

No American lead and zinc and their manufactures are consumed in this consular district. It is the opinion of most experienced merchants in these articles here that the best manner of introducing American lead and zinc into the Syrian markets would be to first familiarize the latter with these American metals by sending samples of the same in the forms described above to be sold by commission agents here to the account of their manufacturers, provided the prices are somewhat lower than those referred to in the foregoing answers, or if the American manufacturers can not afford going so far their prices at least should not exceed those charged by foreign exporters. The necessity of sending samples into this market is considered to be an absolute one in view of the fact that it is needless to expect Syrian merchants to order any kind of goods from the United States and pay for them before they can see them and judge for themselves as to the advantages which may be derived from addressing their orders to one country in preference to another.

It is worth mentioning that unless a direct line of communication is established between the United States and Syria to lessen the freight expenses it would be entirely impossible for American manufacturers to compete with foreign exporters of these and other articles in the Syrian market.

CONSTANTINE KHOURI,
Acting Vice-Consul.

BEIRUT, *October 15, 1890.*

CHINA.

HONGKONG.

FOREIGN LEAD AND ZINC.

The lead and zinc received from England and Germany comprise the principal source of supply for Hongkong.

In the absence of a custom-house no reliable statistics of importations can be had, but the receipts are large.

Hongkong being the point from which reshipments to the various Chinese ports are made, lead is received in the various forms common in commerce, in pigs, pipes, sheets, ground in oil for painting, etc. Zinc, principally in plates of 10 to 12 pounds.

AMERICAN LEAD AND ZINC.

No American lead has reached this market for eight years, and I do not find that zinc of American production has ever been found in the Hongkong market.

As to the best means of introducing these articles I can see no present prospect for a successful competition with England and Germany, owing to a vast difference in prices between lead (I do not know the price of zinc in the United States) as quoted here and in New York.

Lead in pigs is selling here at $3.12½ United States gold per 100 pounds. Zinc in plates at $5.63 per 100 pounds. So that in order to reach this market the price of lead must advance here above 66 per cent or fall in New York above 40 per cent in order to bring prices to such an equality as to make exportation from the United States to Hongkong possible. Until such a change in condition of prices shall have been reached—a thing not likely to occur—I do not undertake to say through what means the American producers of lead can reach the markets of eastern Asia.

O. H. SIMONS,
Consul.

HONGKONG, *November 12, 1890.*

NINGPO AND WÊNCHOW.

LEAD IMPORTS.

The following figures, gleaned from the reports of the Imperial maritime customs of China in reference to lead, may be of interest. The picul quoted is equivalent to 133⅓ pounds avoirdupois. The imports of

lead into the ports of Ningpo and Wênchow in this consular district from 1880 are:

Year.	Ningpo.	Wên-chow.	Year.	Ningpo.	Wên-chow.
	Piculs.	*Piculs.*		*Piculs.*	*Piculs.*
1880	9,520	.....	1886	7,461·74	390·13
1881	9,649	280·40	1887	8,221·14	334·67
1882	10,517·15	209·89	1888	10,205·25	324·98
1883	9,679·09	392·69	1889	11,351·39	345·16
1884	12,199·98	329·16	1890*	9,343	161·39
1885	9,077·12	226·23			

* Representing the first nine months of the year.

The import duty on lead in pigs per 100 catties is 2 mace 5 candarins (about 27 cents United States currency), on lead in sheets per 100 catties 5 mace 5 candarins (63 cents United States currency). One hundred catties are 1 picul, 1 picul is 133⅓ pounds. On account of the higher duty little or no lead in sheets is imported.

All the lead for China is imported from Europe via Hongkong to Shanghai, from where it is distributed all over the East; no lead is imported from America, at least none comes into this consular district; it is sold here in small lots for 5 taels* per picul for pig, and 6 taels per picul for sheet. The principal manufactures of lead are small wares, urns, teapots, etc.; an immense quantity is consumed in the making of figures, candelabra, and "sycee" for the temples, but the great bulk of this metal is consumed in the linings of tea boxes. In some parts of China lead is sometimes buried with the dead as money or "sycee." It will be seen by the customs reports for the years 1880–1890 that the import of lead is slowly but steadily increasing, and from present appearances this year's imports bid fair to be the largest in the history of this port. This being the greatest green tea district, the consumption of lead for tea boxes is of course large and is governed by the success or nonsuccess of the tea crops.

AMERICAN LEAD.

If our merchants can lay down lead at this port or Shanghai at a cost to themselves to allow to undersell the European grade and would be satisfied with small profits at first, they could in time build up a very good market, not only here but in all the East. The Chinese when once they are familiar with certain brands of any goods are not inclined to change, even if the new brand is cheaper and better, but nevertheless I am of the opinion that a little effort in this direction might be productive of much good.

* Hai-Kwan tael quoted here is equal in value to $1.15 gold.

ZINC IMPORTS.

Zinc is imported from Europe in small quantities, average for the past ten years being 600 piculs, and is nearly all consumed in foreign houses. It is sold here for 6 taels per picul.

JOHN FOWLER,
Consul.

NINGPO, *December 17, 1890.*

JAPAN.

NAGASAKI.

There are no lead or zinc mines or mining within this district.

FOREIGN LEAD AND ZINC.

Although lead and zinc are imported from foreign countries, the amount used in Nagasaki is small. The amount of lead used is about 75,000 pounds, and that of zinc about 43,750 pounds. The lead is mostly used by the machine factories and by the fishermen in the vicinity for their fishing instruments, mostly weights on the lines, and the zinc is consumed by the mines in this and the neighboring prefectures.

AMERICAN LEAD AND ZINC.

But a small portion of the above-reported quantities is from the United States, and with the existing facilities of importation from China and other countries the amount must remain insignificant.

W. H. ABERCROMBIE,
Consul.

NAGASAKI, JAPAN, *October 27, 1890.*

PHILIPPINE ISLANDS.

Neither lead nor zinc is produced in the Philippines, although it is said that lead is among the undeveloped treasures of the archipelago.

FOREIGN LEAD AND ZINC.

All the lead and zinc used here come from England, Germany, China, and the British Possessions. None is accredited to the United States, although it is possible that some may come from our country via Hong-

kong; if so, it is accredited to the British Possessions, as everything is that passes through Hongkong. Thus, while large quantities of flour and salt meats come here from San Francisco, the custom-house books show only that they come from Hongkong, where they are transshipped from the Pacific Mail and Occidental and Oriental steamers to the steamers of the Hongkong and Manila line. No steamers come here direct from any American port and our sailing vessels bring only petroleum.

The custom-house books show that last year England sent to Manila 1,100 pounds of lead ingots, while the British Possessions sent 53 tons and China 2 tons. The major portion of this amount was probably solder, used by the numerous Chinese and native tinsmiths. No zinc is reported.

Type metal, as well as solder, is classed as lead, and comes from England and Germany direct. Last year the former sent 2,663 pounds and the latter 361 pounds.

There is no lead pipe used, the water being conducted exclusively in iron pipe. American lead and zinc goods are not to be found.

AMERICAN LEAD AND ZINC.

The best manner of introducing American lead and zinc would be for the manufacturer to send an active, energetic man here, who can speak Spanish and who would devote his entire time to the exhibition of his samples and the education of the dealers to the belief that lead can be made useful and that the United States can sell just as good an article and at as low a price as England or Germany. The principal obstacle he would have to contend with would be the deep-seated prejudice against everything American. Trade is almost entirely in the hands of English, German, and Chinese dealers, who prefer to buy in Europe. It is a singular fact that the major portion of the American goods sold here, excepting flour and salt meat, comes from London. Large quantities of the "Eagle" brand condensed milk, manufactured at Elgin, Ill., are used here, and yet not a single case of it comes from the United States direct; it is all purchased in London. I have been frequently told by merchants that they can buy such American goods as they need more advantageously in London than directly from the manufacturers. If this be true, I think our manufacturers ought to know it.

Another difficulty in the way of the introduction of lead and zinc would be the fact that the native and Chinese mechanics, who are the only metal workers, have not been accustomed to their use and do not take kindly to anything new or that requires a departure from the methods they have followed for years. Hence the sending of circulars or samples, and trusting to local dealers to interest themselves in pushing the goods, would be almost sure to be barren of results.

As indicated above, American goods of the kinds produced in Europe are at a disadvantage here and need active, persistent Americans to

push them into the market and overcome the odds against them by demonstrating that we can produce better goods at lower prices, or at prices as low, as those paid for European products.

ALEX. R. WEBB,
Consul.

MANILA, *October 8, 1890.*

SIAM.

Neither lead nor zinc is found in Siam. Foreign lead and zinc are imported in sheet form to the value of $8,950 annually. American lead and zinc and their manufactures do not reach Siam. The best way to introduce them would be to appoint the commission houses in Hongkong and Singapore as agents.

JACOB I. CHILD,
Consul-General.

BANGKOK, *October 25, 1890.*

CONTINENT OF AFRICA.

EGYPT.

LEAD IMPORTS.

Lead and zinc are consumed in Egypt, but are the products of foreign countries. The greater part comes from France. This is probably partly owing to the fact that there is a French gas company and a French water company in Egypt, which probably import their tubes and other lead articles from their own country. Next come the French Possessions in the Mediterranean, Belgium being the third on the list.

The following table, taken from the official report of the director-general of customs for 1889, shows the importation of lead, etc., from various countries into Egypt, and gives plainly the quantity and value imported from each separate country, as well as the forms in which it is shipped:

Lead and articles thereof imported into Egypt during 1889.

Countries.	Quantity.	Value.
Lead, mixed with antimony; pewter alloyed with lead (in lumps or ingots).		
	Pounds.	
England	167,894	$31,161
British Possessions in the far East	2,464	476
Germany	1,835	185
Austria	2,361	340
France	6,895	1,190
French Possessions in the Mediterranean	272	57
Italy	223	30
Total	182,944	33,439
Typographical and printing characters.		
Austria	321	321
France	2,509	2,509
Greece	357	357
Italy	2,215	2,215
Turkey	4,034	1,350
Total	23,412	6,752
Lead, etc., in sheets, in tubes, or otherwise manufactured.		
England	13,505	553
Germany	1,088	50
Austria	5,141	220
Belgium	21,153	954
China and the far East	5,821	267
France	1,007,074	39,431
French Possessions in the Mediterranean	41,020	1,602
Italy	4,850	304
Other countries	49,000	1,694
Total	1,148,652	45,075

AMERICAN LEAD.

According to the above table it appears that no lead is imported directly from the United States. Whether or not American lead is imported indirectly through other countries and is included in the statements of imports from such countries, I am unable to state, but I have been told that bars of lead have been seen here with the stamp of American manufacturers.

The best way of introducing American lead into the Egyptian market would be to send a small consignment on trial, giving at the same time the lowest prices at which it could be sold. Lead in sheets, bird shot, and lead pipes would probably meet with the best success.

The best way of shipping a small consignment to Egypt would, in my opinion, be by a vessel passing through the Suez Canal, which could land the consignment at Port Said in passing. In this way something might possibly be saved in freight.

I am informed that Mr. Leopold Edward Beisner, of Cairo, would probably be willing to receive communications on this subject, and might even be persuaded to accept a small consignment. Mr. Leopold Menshausen, of Alexandria, might also be communicated with on the subject of lead.

LOUIS B. GRANT,
Acting Consul-General.

CAIRO, *October 9, 1890.*

MADEIRA.

There is no lead or zinc mining in this district. Sheet lead and zinc are used here for domestic purposes, i. e., baths, water pipes, etc., to a very limited extent. These come from England and Germany.

The trade could be introduced here only by commercial travelers; but the insignificance of the trade would hardly justify the outlay.

THOMAS C. JONES,
Consul.

FUNCHAL, *October 13, 1890.*

MOROCCO.

Although there are mines of lead in Morocco, the Sultan prohibits the opening of the same.

The lead consumed in Morocco is imported in the shape of pipes for wells, cisterns, etc., but in a limited quantity. The importation of lead otherwise is prohibited, coming under the head of arms and ammunition, which only the Sultan can import.

With regard to zinc, very little is imported for the use of European residents.

FELIX A. MATHEWS,
Consul-General.

TANGIER, May 18, 1891.

AUSTRALASIA.

NEW SOUTH WALES.

There are no mines extant for the production of lead and zinc alone in this colony.

Zinc is not yet produced at all, but recent discoveries, containing 41·25 per cent of zinc, have been made at Mount Stewart, in the interior.

Lead for itself is not mined, though lodes containing from 5 to 75 per cent of lead are known to exist in many places.

Lead occurs in the Broken Hill silver mines, in this colony, mixed with the silver. The ore containing the silver and lead is for the most part exported to Great Britain as ore.

In 1889 the Proprietary Silver Mine at Broken Hill raised 161,500 tons of ore, of which 145,041 tons were smelted, giving 6,236,006 ounces of silver and 25,170 tons of lead. This is the only mine which exports the metals, the others shipping the ore.

In 1889 46,965·9 tons of silver and lead ore, valued at £971,198, were exported. The total quantity of silver and lead metal exported from this colony up to 1889 is 52,872 tons, valued at £4,168,397.

The percentage of lead in silver ores varies from a minute quantity to 55 per cent.

There are no statistics available as to cost of smelting.

There is a large surplus of lead which is exported to Great Britain.

The above figures are exports from this colony. Nearly all the product from the Broken Hill silver field, however, goes away via South Australia.

The statistics for 1890 are not available, but it is safe to say the production of ores is increasing.

Both lead and zinc are consumed in this district, but exclusively in a manufactured state.

American lead and zinc and their manufactures are used but little, if at all, in this district.

GEORGE T. BOGGS,
Commercial Agent.

NEW CASTLE, *February 12, 1891.*

NEW ZEALAND.

IMPORTS OF LEAD AND ZINC.

There are no lead or zinc mines developed in this colony up to the present. All the lead and zinc used in New Zealand are imported from other countries.

The following table will show the rate of duty, quantity, and value of lead and zinc used in this colony during last year (1889), together with the countries whence those articles were imported:

Whence imported.	Rate of duty.	Quantity.	Value.
Lead (pig).		*Tons. cwt.*	
United Kingdom	Free	225	$16,788
New South Wales	do	61	4,417
Victoria	do	7	535
Tasmania	do	1	107
Lead (pipe).			
United Kingdom	85 cents per cwt	37	175
Lead (sheet).			
United Kingdom	36 cents per cwt	12 519	49,854
Victoria	do	184	544
New South Wales	do	353	1,600
South Sea Islands	do	71	49
Total value of lead			74,069
Zinc (plain sheet).			
United Kingdom	Free	4 218	24,740
Victoria	do	19	146
New South Wales	do	51	481
Zinc (perforated sheet).			
United Kingdom	25 per cent ad valorem		2,345
Zinc (manufactures).			
United Kingdom	do		180
United States	do		170
Total value of zinc			28,062

FOREIGN LEAD AND ZINC.

From the foregoing figures it will be observed that the total volume of trade in lead and zinc for the past twelve months was $102,131, of which the United States furnished the exceedingly insignificant sum of $170. All countries meet on a common level so far as the customs duties are concerned. Therefore, there is no reason why, if a proper effort were made, the United States should not supply a much larger proportion of the imports than it does at present. Nearly all our products and manufactures in this market are greatly appreciated, especially mining and agricultural machinery, kerosene, and tobacco.

Lead is mostly used for house-roofing, guttering, plumbing, and for permanent ballast for the smaller class of vessels, such as yachts and coasting cutters. Zinc is largely used for the purposes enumerated

above, but perhaps one of the principal uses to which it is put to is that of making up "baths." I am informed by importers of zinc that almost all the zinc used in the Australasian colonies is imported from Belgium, via London.

The cost of zinc in England on board the vessel is quoted to New Zealand importers at £25 per ton ($121), and freight at £3 2*s.* 6*d.* ($15.85).

AMERICAN LEAD AND ZINC.

As to the best means of introducing American lead and zinc into into this market it is difficult to say. One of the most satisfactory, if, indeed, it is not altogether the better way, would be to send an agent who thoroughly understood his business with samples of the various kinds and qualities of lead and zinc produced in the United States. This appears to me to offer the most effective means of successfully introducing our products. Still another cheaper method suggests itself, that of sending samples and price lists to some of the wholesale ironmongers in the colony. This would, of course, obviate the necessity of sending a representative, and would save the expense he must necessarily incur, but I seriously doubt whether the result would prove as satisfactory as if the goods were accompanied with a competent representative.

No difficulty will be experienced by the adoption of either of the courses I have suggested for the introduction of American lead and zinc into New Zealand, provided the quality is superior, or even equal, to the products of the countries which supply this colony at present, and the cost lower.

JNO. D. CONNOLLY,
Consul.

AUCKLAND, *October 27, 1890.*

QUEENSLAND.

Present depth of mines slightly over 300 feet.

Lead averages 20 per cent in silver ores.

Average of lead obtained by smelting 75 per cent of contents.

Process of smelting; water jacket blast furnaces.

Do not treat for zinc.

Value of ore depends entirely upon the silver contents.

There is a surplus production of lead which is exported to London, England.

The production of ores is increasing. Wages of miners, $15.30 per week.

Foreign lead is imported to the annual amount of about 6 tons of white lead for painting and 6 tons for plumbing purposes, and zinc consumed in the manufacture of galvanized iron which is extensively used in the erection of buildings.

GEORGE HARRIS,
Consular Agent.

BRISBANE, *January 17, 1891.*

SPECIAL CONSULAR REPORTS.

EXTENSION OF MARKETS

FOR

AMERICAN FLOUR.

Vol. X.

ISSUED FROM THE BUREAU OF STATISTICS, DEPARTMENT OF STATE.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1894.

VALUES OF FOREIGN COINS.

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

These estimates "are to be taken (by customs officers) in computing the value of all foreign merchandise made out in any of said currencies, imported into the United States."

The following statements, running from January 1, 1874, to April 1, 1894, have been prepared to assist in computing the proper values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money values of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. When it is taken into account that the ruble of Russia, for instance, has fluctuated from 77.17 cents in 1874 to 37.2 cents in April, 1894, such computations are wholly misleading. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1890, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1876, 1877, 1879, 1881, and 1882 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz: (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

A.—*Countries with fixed currencies.*

Countries.	Standard.	Monetary unit.	Value in terms of United States gold.	Coins.
Argentine Republic*	Gold and silver	Peso	$0.96,5	Gold—Argentine ($4.82,4) and ½ Argentine; silver—peso and divisions.
Austria-Hungary†	Gold	Crown	.20,3	Gold—20 crowns ($4.05,2) and 10 crowns.
Belgium	Gold and silver	Franc	.19,3	Gold—10 and 20 franc pieces; silver—5 francs.
Brazil	Gold	Milreis	.54,6	Gold—5, 10, and 20 milreis; silver—½, 1, and 2 milreis.
Chile‡	Gold and silver	Peso	.91,8	Gold—escudo ($1.82,4), doubloon ($4.56,1), and condor ($9.12,8); silver—peso and divisions.
Cuba	do	do	.98,6	Gold—doubloon ($5.01,7); silver—peso.
Denmark	Gold	Crown	.26,8	Gold—20 and 20 crowns.
Egypt	do	Pound (100 piasters).	4.94,3	Gold—10, 20, 50, and 100 piasters; silver—2, 5, 10, and 20 piasters.
Finland	do	Mark	.19,3	Gold—10 and 20 marks ($1.93 and $3.85,9).
France	Gold and silver	Franc	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Gold	Mark	.23,8	Gold—5, 10, and 20 marks.
Great Britain	do	Pound sterling	4.86,6½	Gold—sovereign (pound sterling) and half sovereign.
Greece	Gold and silver	Drachma	.19,3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	do	Gourde	.96,5	Silver—gourde.
Italy	do	Lira	.19,3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Liberia	Gold	Dollar	1.00	
Netherlands‡	Gold and silver	Florin	.40,2	Gold—10 florins; silver—½, 1, and 2½ florins.
Portugal	Gold	Milreis	1.08	Gold—1, 2, 5, and 10 milreis.
Spain	Gold and silver	Peseta	.19,3	Gold—25 pesetas; silver—5 pesetas.
Sweden and Norway	Gold	Crown	.26,8	Gold—10 and 20 crowns.
Switzerland	Gold and silver	Franc	.19,3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Gold	Piaster	.04,4	Gold—25, 50, 100, 200, and 500 piasters.
Venezuela	Gold and silver	Bolivar	.19,3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

* In 1874 and 1875 the gold standard prevailed in the Argentine Republic. Its currency does not appear in the statements again until 1883, when the double standard prevailed, and the peso attained a fixed value of 96.5 cents.

† On reference to the table of "fluctuating currencies," it will be seen that Austria had the silver standard up to and including the quarter ending July 1, 1892. The next quarter (October 1) inaugurated the gold standard (*see* note under table of "fluctuating currencies").

‡ The gold standard prevailed in Chile until January 1, 1890. The value of the peso has been the same under both standards.

‡ The Netherlands florin, as will be seen in the "fluctuating" table, became fixed in value (40.2 cents) in 1880.

B.—*Countries with fluctuating currencies, 1874–'90.*

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1874.	1875.	1876.	1880.	1883.	1884.
Austria-Hungary*.	Silver	Florin	$0.47,6	$0.45,3	$0.45,3	$0.41,3	$0.40,1	$0.39,8
Bolivia	do	Dollar until 1880; boliviano thereafter.	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Central America	do	Peso	.96,5	.91,8	.91,8	.83,6	.....	.....
China	Silver	Haikwan tael	1.61	1.61	.....	.....	.....	.....
Colombia	do	Peso	.96,5	.96,5	.96,5	.83,6	.81,2	.80,6
Ecuador	do	do	.96,5	.91,8	.91,8	.83,6	.81,2	.80,6
Egypt†	Gold	Pound (100 piasters).	.....	.....	4.97,4	4.97,4	4.90	4.90
India	Silver	Rupee	.45,8	.43,6	.43,6	.39,7	.38,6	.38,3
Japan	Gold	Yen	.99,7	.99,7	.99,7	.99,7	.....	.....
	Silver		.....	.....	.....	.....	.87,6	.86,9
Mexico	do	Dollar	1.04,7½	.99,8	.99,8	.90,9	.88,2	.87,5
Netherlands‡	Gold and silver	Florin	.40,5	.38,5	.38,5	.40,2	.....	.....
Peru	Silver	Sol	.92,5	.91,8	.91,8	.83,6	.81,2	.80,6
Russia	do	Ruble	.77,17	.73,4	.73,4	.66,9	.65	.64,5
Tripoli	do	Mahbub of 20 piasters.	.87,09	.82,9	.82,9	.74,8	.73,3	.72,7

Countries.	Standard.	Monetary unit.	Value in terms of the United States gold dollar on January 1—					
			1885.	1886.	1887.	1888.	1889.	1890.
Austria-Hungary*.	Silver	Florin	$0.39,3	$0.37,1	$0.35,9	$0.34,5	$0.33,6	$0.42
Bolivia	do	Dollar until 1880; boliviano thereafter.	.79,5	.75,1	.72,7	.69,9	.68	.85
Central America	do	Peso	.....	.....	.....	.69,9	.68	.85
Colombia	do	do	.79,5	.75,1	.72,7	.69,9	.68	.85
Ecuador	do	do	.79,5	.75,1	.72,7	.69,9	.68	.85
Egypt†	Gold	Pound (100 piasters).	4.90	4.90	4.94,3	4.94,3	4.94,3	4.93,3
India	Silver	Rupee	.37,8	.35,7	.34,6	.33,2	.32,3	.40,4
Japan	Gold	Yen	.....	.....	.99,7	.99,7	.99,7	.99,7
	Silver		.85,8	.81	.78,4	.75,3	.73,4	.91,7
Mexico	do	Dollar	.86,4	.81,6	.79	.75,9	.73,9	.92,3
Peru	Silver	Sol	.79,5	.75,1	.72,7	.69,9	.68	.85
Russia	do	Ruble	.63,6	.60,1	.58,2	.55,9	.54,4	.68
Tripoli	do	Mahbub of 20 piasters.	.72,7	.67,7	.65,6	.63	.61,4	.76,7

*The silver standard prevailed in Austria-Hungary up to 1892. The law of August 2 of that year (*see* CONSULAR REPORTS, No. 147, p. 623) established the gold standard.

†The Egyptian pound became fixed in value at $4.94,3 in 1887.

‡The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40.2 cents.

C.—*Quarterly valuations of fluctuating currencies, 1891–'94.*

Countries.	Monetary unit.	1891.				1892.			
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.	July 1.	Oct. 1.
Austria-Hungary *	Gold crown	.....	.....	.....	.....	.....	.....	.....	$0.20,3
	Silver florin	$0.38,1	$0.36,3	$0.36,3	$0.35,7	$0.34,1	$0.32,8	$0.32	.....
Bolivia	Silver boliviano	.77,1	.73,5	.73,6	.72,3	.69,1	.66,5	.64,9	.61,6
Central America	Silver peso	.77,1	.73,5	.73,6	.72,3	.69,1	.66,5	.64,9	.61,6
China†	Shanghai tael	1.13,9	1.08,5	1.08,7	1.06,8	1.02,1	.98,2	.95,8	.91
	Haikwan tael	1.27	1.20,9	1.21	1.18,9	1.13,7	1.09,3	1.06,7	1.01,3
Colombia	Silver peso	.77,1	.73,5	.73,6	.72,3	.69,1	.66;5	.64,9	.61,6
Ecuador	.....do	.77,1	.73,5	.73,6	.72,3	.69,1	.66,5	.64,9	.61,6
India	Silver rupee	.36,6	.34,9	.35	.34,3	.32,8	.31,6	.30,8	.29,3
Japan‡	Silver yen	.83,1	.79,2	.79,3	.77,9	.74,5	.71,6	.69,9	.66,4
Mexico	Silver dollar	.83,7	.80	.80	.78,5	.75	.72,2	.70,4	.66,9
Peru	Silver sol	.77,1	.73,5	.73,6	.72,3	.69,1	.66,5	.64,9	.61,6
Russia§	Silver ruble	.61,7	.58,8	.58,8	.57,8	.55,3	.53,1	.51,9	.49,2
Tripoli	Silver mahbub	.69,5	.66,3	.66,4	.65,2	.62,3	.60	.58,5	.55,5
Venezuela ‖	Silver bolivar	.15,4	.14,7	.14,7	.14,5	.13,8	.13,3	.13	.12,3

Countries.	Monetary unit.	1893.				1894.	
		Jan. 1.	April 1.	July 1.	Oct. 1.	Jan. 1.	April 1.
Bolivia	Silver boliviano	$0.61,3	$0.61	$0.60,4	$0.53,1	$0.51,6	$0.46,5
Central America	Silver peso	.61,3	.61	.60,4	.53,1	.51,6	.46,5
China†	Shanghai tael	.90,6	.90,1	.89,2	.78,4	.76,2	.68,6
	Haikwan tael	1.01	1.00,4	.99,4	.87,4	.84,9	.76,5
Colombia	Silver peso	.61,3	.61	.60,4	.53,1	.51,6	.46,5
Ecuador	.....do	.61,3	.61	.60,4	.53,1	.51,6	.46,5
India	Silver rupee	.29,2	.29	.28,7	.25,2	.24,5	.22,1
Japan‡	Silver yen	.66,1	.65,8	.65,1	.57,3	.55,6	.50,1
Mexico	Silver dollar	.66,6	.66,2	.65,6	.57,7	.56	.50,5
Peru	Silver sol	.61,3	.61	.60,4	.53,1	.51,6	.46,5
Russia§	Silver ruble	.49,1	.48,8	.48,3	.42,5	.41,3	.37,2
Tripoli	Silver mahbub	.55,3	.55	.54,5	.47,9	.46,5	.41,9

* Austria-Hungary had the silver standard up to August, 1892 (*see* note to "fluctuating" table B).

† China (silver). The Haikwan tael is the customs tael, and the Shanghai tael that used in trade. Consul-General Denny (CONSULAR REPORTS No. 43, p. 516) says: "The value of the tael varies in the different ports of China, and every port has two taels, one being the Government, or Haikwan, tael, in which all duties have to be paid, and the other the market tael, the former exceeding the latter by some 11 per cent."

‡ Gold is the nominal standard in Japan, but silver is practically the standard. The fixed value of the gold yen is 99.7 cents.

§ The gold ruble is valued at 77.2 cents. Silver is the nominal standard, but paper is the actual currency, and its depreciation is measured by the gold standard.

‖ The Venezuelan bolivar became fixed in value (19.3 cents) on January 1, 1892.

FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in CONSULAR REPORTS and in Commercial Relations:

Foreign weights and measures, with American equivalents.

Denominations.	Where used.	American equivalent.
Almude	Portugal	4.422 gallons.
Ardeb	Egypt	7.6907 bushels.
Are	Metric	0.02471 acre.
Arobe	Paraguay	25 pounds.
Arratel or libra	Portugal	1.011 pounds.
Arroba (dry)	Argentine Republic	25.3175 pounds.
Do	Brazil	32.38 pounds.
Do	Cuba	25.3664 pounds.
Do	Portugal	32.38 pounds.
Do	Spain	25.36 pounds.
Do	Venezuela	25.4024 pounds.
Arroba (liquid)	Cuba, Spain, and Venezuela	4.263 gallons.
Arshine	Russia	28 inches.
Arshine (square)	do	5.44 square feet.
Artel	Morocco	1.12 pounds.
Baril	Argentine Republic and Mexico	20.0787 gallons.
Barrel	Malta (customs)	11.4 gallons.
Do	Spain (raisins)	100 pounds.
Berkovet	Russia	361.12 pounds.
Bongkal	India	832 grains.
Bonw	Sumatra	7,096.5 square meters.
Bu	Japan	0.1 inch.
Butt (wine)	Spain	140 gallons.
Caffiso	Malta	5.4 gallons.
Candy	India (Bombay)	529 pounds.
Do	India (Madras)	500 pounds.
Cantar	Morocco	113 pounds.
Do	Syria (Damascus)	575 pounds.
Do	Turkey	124.7036 pounds.
Cantaro (Cantar)	Malta	175 pounds.
Carga	Mexico and Salvador	300 pounds.
Catty	China	1.333⅓ (1⅓) pounds.
Do	Japan	1.31 pounds.
Do	Java, Siam, Malacca	1.35 pounds.
Do	Sumatra	2.12 pounds.
Centaro	Central America	4.2631 gallons.
Centner	Bremen and Brunswick	117.5 pounds.
Do	Darmstadt	110.24 pounds.
Do	Denmark and Norway	110.11 pounds.
Do	Nuremberg	112.43 pounds.
Do	Prussia	113.44 pounds.
Do	Sweden	93.7 pounds.
Do	Vienna	123.5 pounds.
Do	Zollverein	110.24 pounds.
Do	Double or metric	220.46 pounds.
Chih	China	14 inches.
Coyan	Sarawak	3,098 pounds.
Do	Siam (Koyan)	2,667 pounds.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalent.
Cuadra	Argentine Republic	4.2 acres.
Do	Paraguay	78.9 yards.
Do	Paraguay (square)	8.077 square feet.
Do	Uruguay	Nearly 2 acres.
Cubic meter	Metric	35.3 cubic feet.
Cwt. (hundredweight)	British	112 pounds.
Desiatine	Russia	2.6997 acres.
Do	Spain	1.599 bushels.
Drachme	Greece	Half ounce.
Dun	Japan	1 inch.
Egyptian weights and measures	(*See* CONSULAR REPORTS No. 144.)	
Fanega (dry)	Central America	1.5745 bushels.
Do	Chile	2.575 bushels.
Do	Cuba	1.599 bushels.
Do	Mexico	1.54728 bushels.
Do	Morocco	Strike fanega, 70 lbs full fanega, 128 lbs.
Do	Uruguay (double)	7.776 bushels.
Do	Uruguay (single)	3.888 bushels.
Do	Venezuela	1.599 bushels.
Fanega (liquid)	Spain	16 gallons.
Feddan	Egypt	1.03 acres.
Frail (raisins)	Spain	50 pounds.
Frasco	Argentine Republic	2.5096 quarts.
Do	Mexico	2.5 quarts.
Fuder	Luxemburg	264.17 gallons.
Garnice	Russian Poland	0.88 gallon.
Gram	Metric	15.432 grains.
Hectare	do	2.471 acres.
Hectoliter:		
Dry	do	2.838 bushels.
Liquid	do	26.417 gallons.
Joch	Austria-Hungary	1.422 acres.
Ken	Japan	4 yards.
Kilogram (kilo)	Metric	2.2046 pounds.
Kilometer	do	0.621376 mile.
Klafter	Russia	216 cubic feet.
Kota	Japan	5.13 bushels.
Korree	Russia	3 5 bushels.
Last	Belgium and Holland	85.134 bushels.
Do	England (dry malt)	82.52 bushels.
Do	Germany	2 metric tons (4,480 pounds).
Do	Prussia	112.29 bushels.
Do	Russian Poland	113⅜ bushels.
Do	Spain (salt)	4,760 pounds.
League (land)	Paraguay	4,633 acres.
Li	China	2,115 feet.
Libra (pound)	Castilian	7,100 grains (troy).
Do	Argentine Republic	1.0127 pounds.
Do	Central America	1.043 pounds.
Do	Chile	1.014 pounds.
Do	Cuba	1.0161 pounds.
Do	Mexico	1.01465 pounds.
Do	Peru	1.0143 pounds.
Do	Portugal	1.011 pounds.
Do	Uruguay	1.0143 pounds.
Do	Venezuela	1.0161 pounds.
Liter	Metric	1.0267 quarts.
Livre (pound)	Greece	1.1 pounds.
Do	Guiana	1.0791 pounds

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalent.
Load	England (timber)	Square, 50 cubic feet; unhewn, 40 cubic feet; inch planks, 600 superficial feet.
Manzana	Costa Rica	1⅞ acres.
Marc	Bolivia	0.507 pound.
Maund	India	82⅔ pounds.
Meter	Metric	39.37 inches.
Mil	Denmark	4.68 miles
Do	Denmark (geographical)	4.61 miles.
Morgen	Prussia	0.63 acre.
Oke	Egypt	2.7225 pounds.
Do	Greece	2.84 pounds.
Do	Hungary	3.0817 pounds.
Do	Turkey	2.85418 pounds.
Do	Hungary and Wallachia	2.5 pints.
Pic	Egypt	21¼ inches.
Picul	Borneo and Celebes	135.64 pounds.
Do	China, Japan, and Sumatra	133⅓ pounds.
Do	Java	135.1 pounds.
Do	Philippine Islands (hemp)	139.45 pounds.
Do	Philippine Islands (sugar)	140 pounds.
Pie	Argentine Republic	0.9478 foot.
Do	Castilian	0.91407 foot.
Pik	Turkey	27.9 inches.
Pood	Russia	36.112 pounds.
Pund (pound)	Denmark and Sweden	1.108 pounds.
Quarter	Great Britain	8.252 bushels.
Do	London (coal)	36 bushels.
Quintal	Argentine Republic	101.42 pounds.
Do	Brazil	130.06 pounds.
Do	Castile, Chile, Mexico, and Peru	101.61 pounds.
Do	Greece	123.2 pounds.
Do	Newfoundland (fish)	112 pounds.
Do	Paraguay	100 pounds.
Do	Syria	125 pounds.
Do	Metric	220.46 pounds.
Rottle	Palestine	6 pounds.
Do	Syria	5¾ pounds.
Sagen	Russia	7 feet.
Salm	Malta	490 pounds.
Se	Japan	3.6 feet.
Seer	India	1 pound 13 ounces.
Shaku	Japan	10 inches.
Sho	do	1.6 quarts.
Standard (St. Petersburg)	Lumber measure	165 cubic feet.
Stone	British	14 pounds.
Suerte	Uruguay	2,700 cuadras (*see* cuadra).
Tael	Cochin China	590.75 grains (troy).
Tan	Japan	0.25 acre.
To	do	2 pecks.
Ton	Space measure	40 cubic feet.
Tonde (cereals)	Denmark	3.94783 bushels.
Tondeland	do	1.36 acres.
Tsubo	Japan	6 feet square.
Tsun	China	1.41 inches.
Tunna	Sweden	4.5 bushels.
Tunnland	do	1.22 acres.
Vara	Argentine Republic	34.1208 inches.
Do	Castile	0.914117 yard.
Do	Central America	38.874 inches.

Foreign weights and measures, with American equivalents—Continued.

Denominations.	Where used.	American equivalent.
Vara	Chile and Peru	33.367 inches.
Do	Cuba	33.384 inches.
Do	Curaçao	33.375 inches.
Do	Mexico	33 inches.
Do	Paraguay	34 inches.
Do	Venezuela	33.384 inches.
Vedro	Russia	2.707 gallons.
Vergees	Isle of Jersey	71.1 square rods.
Verst	Russia	0.663 mile.
Vlocka	Russian Poland	41.98 acres.

METRIC WEIGHTS AND MEASURES.

Metric weights.

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
Centigram($\frac{1}{100}$ gram) equals 0.1543 grain.
Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
Gram equals 15.432 grains.
Decagram (10 grams) equals 0.3527 ounce.
Hectogram (100 grams) equals 3.5274 ounces.
Kilogram (1,000 grams) equals 2.2046 pounds.
Myriagram (10,000 grams) equals 22.046 pounds.
Quintal (100,000 grams) equals 220.46 pounds.
Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

Metric dry measure.

Millimeter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
Liter equals 0.908 quart.
Decaliter (10 liters) equals 9.08 quarts.
Hectoliter (100 liters) equals 2.838 bushels.
Kiloliter (1,000 liters) equals 1.308 cubic yards.

Metric liquid measure.

Millimeter ($\frac{1}{1000}$ liter) equals 0.27 fluid ounce.
Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
Liter equals 1.0567 quarts.
Decaliter (10 liters) equals 2.6417 gallons.
Hectoliter (100 liters) equals 26.417 gallons.
Kiloliter (100 liters) equals 264.17 gallons.

Metric measures of length.

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.
Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.
Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.
Meter equals 39.37 inches.

Decameter (10 meters) equals 393.7 inches.
Hectometer (100 meters) equals 328 feet 1 inch.
Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).
Myriameter (10,000 meters) equals 6.2137 miles.

Metric surface measures.

Centare (1 square meter) equals 1,550 square inches.
Are (100 square meters) equals 119.6 square yards.
Hectare (10,000 square meters) equals 2.471 acres.

NOTE.

This series of reports, with the exception of some few that arrived too late, and are given in this number, was published in the monthly CONSULAR REPORTS, beginning in No. 161 (February, 1894), and ending in No. 165 (June, 1894). They are now published in a special number in order that they may be accessible, in complete form, to those who are specially interested in the subject.

The paging of this number, beginning page 155, is in continuation of volume X, Special Consular Reports, "Lead and Zinc Mining in Foreign Countries," with which it should be bound in volume form.

EXTENSION OF MARKETS FOR AMERICAN FLOUR.

CIRCULAR.

On December 5, 1893, the following circular was addressed by the Department to all consular officers of the United States:

You are hereby requested to prepare for publication reports upon "The Extension of Markets for American Wheat Flour."

The following interrogatories cover the principal points upon which information is desired:

(1) What is the standard of living in your district? Are the people ready to eat American flour?

(2) What quality of flour is most used?

(3) What quantity of American wheat flour was imported into your district in the year ending June 30, 1891?

(4) What quantity in the year ending June 30, 1892?

(5) What quantity in the year ending June 30, 1893?

(6) What quantity of American wheat each year during the same period?

(7) What quantity of wheat flour from other countries during the same period?

(8) What quantity of wheat from other countries during the same period?

(9) What is the import duty on American wheat flour?

(10) What is the import duty on American wheat?

(11) What is the import duty on wheat flour from other countries?

(12) What is the import duty on wheat from other countries?

(13) What are the facilities for monetary exchange?

(14) What are the facilities for shipping from the United States to your port?

(15) If there are any obstacles in the way of the extension of trade in American flour, what are they?

(16) What, in your opinion, are the prospects for doing a more extensive business in American flour in the country in which you represent the United States?

In answer to questions 3, 4, 5, 6, 7, and 8 consular officers at seaports will furnish official statistics, others will furnish estimates.

Questions 9, 10, 11, and 12 are to be answered only by the consul-general in each country.

CANADA.

MANITOBA.

STANDARD OF LIVING.

The standard of living here is high. The higher grades of Hungarian-process flour are extensively used, and are easily had from local manufacturers, being obtained from a plentiful supply of spring wheat raised in this province and in the Northwest Territories.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are excellent. There are ten chartered and two private banks doing business in this city (Winnipeg); besides, there are within this consulate chartered banks doing a regular business at Port Arthur, Fort William, Rat Portage, Keewatin, Portage la Prairie, Brandon, Regina, Calgary, Lethbridge, and Prince Albert. There are two competing railroad lines to this port from St. Paul and Minneapolis, both of which have terminal points at Duluth.

AMERICAN FLOUR AND WHEAT.

American flour is barred from this market by an import duty of 75 cents per barrel. Besides, the freight rates from American points make competition with local mills difficult, if not impossible. Good wheat can be had close at hand in abundance at first cost direct from the farmer. With a full interchange of flour between the United States and the territory embraced within this consulate, our American millers might at times sell here, but they could not secure a steady, profitable market.

This is a wheat-growing country, and large quantities are annually raised for home consumption and for export.

M. M. DUFFIE,
Consul.

WINNIPEG, *January 9, 1894.*

NEW BRUNSWICK.*

ST. JOHN.

STANDARD OF LIVING.

The province of New Brunswick, of which St. John is the principal port of importation, is at present practically cut off from the American markets of cereal products by the operation of the Dominion tariff and the discriminating freights in favor of Canadian products.

The standard of living in this province is not dissimilar to that of the neighboring State of Maine, and doubtless its people would be equally ready to use American flour if prices would permit.

QUALITY OF FLOUR CONSUMED.

The flour used here is largely the product of Manitoba "hard wheat," very similar in grade to the corresponding article manufactured from Minnesota grain; and I am informed by both dealers and consumers that little, if any, difference exists in the quality of the respective flours.

AMERICAN FLOUR AND WHEAT.

The importation of wheat flour from the United States for the past three years ending June 30 has been as follows: 1891, 1,193 barrels; 1892, 818 barrels; 1893, 309 barrels.

During those periods not a bushel of American wheat was entered at this port, and no wheat or wheat flour was imported from any other country.

EXCHANGE AND SHIPPING FACILITIES.

The close relations between this port and the money centers of the United States offer the best of facilities for exchange, and the shipping facilities of St. John are excellent, both by rail and water. The great obstacle in the way of trade in American flour is the high duty placed by the Dominion Government upon it, and as long as that duty remains there is little hope for more extended business in this direction.

The best grade of Manitoba flour retails here at $4.20 per barrel, about the sum at which a similar article of American production is quoted in the markets of Portland, Me.

A large number of vessels entering this port are engaged in the lumber trade and arrive at St. John in ballast from various ports of the United States. By utilizing this means of carriage American flour could doubtless be placed in these markets in favorable competition with Dominion products were it not that the duty of 75 cents per barrel is practically prohibitory.

The nearness of this port to those of the United States and the facilities for transportation by water ought naturally to render the charges for carriage

*An answer to the circular was also received from the consulate at Moncton.

of American flour less than the freight rates by rail from Manitoba; and I am informed that, in recognition of this fact, a discriminating rebate is allowed for the cereal products of the Dominion by those railroads that are operated by the Government.

While the commercial policies of the two countries remain unchanged there can be little hope for extension of business in the articles in question.

JOHN S. DERBY,
Consul.

ST. JOHN, *December 21, 1893.*

ST. STEPHEN.

STANDARD OF LIVING.

The standard of living in this district is high. The people have no objection to American flour, yet are well satisfied with that produced in their own country.

QUALITY OF FLOUR CONSUMED.

The qualities of flour most used are, as compared with flour of the highest grade and best quality, the 80 and 90 per cent grades.

AMERICAN FLOUR AND WHEAT.

The importations of American wheat flour into this district during the years ending June 30, 1891, 1892, and 1893, were as follows:

Year.	Barrels.	Value.
1891	244	$1,459
1892	127	763
1893	80	476

During the same period no American wheat was imported into this district, nor were there any importations of wheat flour from other countries.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange at this port are excellent. Drafts upon various points in the United States can be procured at reasonable rates of exchange. Such facilities are lacking in other parts of the district.

The facilities for shipping from the United States are of the best kind, either by railway to points in various parts of the district or by steamers and sailing vessels to the seaports.

OBSTACLES TO TRADE.

There are several obstacles in the way of the extension of trade in American flour in this district.

Canadian flour is of good quality. The claim is made that it is even better than American flour. It is sold at a low price. The 90 per cent grade can be purchased, delivered, for $3.35. Recently a large lot was offered for $3.25. The best Manitoba patent flours, manufactured from hard wheat and claimed to be equal to the finest Minnesota brands, are retailed for $5 per barrel.

Shipping facilities are superior. The Canadian Pacific Railway furnishes direct connection with the principal points in Canada where flour is manufactured, and the rates for freight are reasonably low.

The last obstacle to be mentioned is the duty of 75 cents per barrel on imported flour, which, at ruling prices, would seem to be sufficient to prevent Americans from entering into competition with Canadian manufacturers.

TRADE OUTLOOK.

Under existing conditions, I am of the opinion, and the consular agents concur with me, that there is no prospect of doing a more extensive business in American flour in this country.

EDGAR WHIDDEN,
Consul.

St. STEPHEN, *December 26, 1893.*

NOVA SCOTIA.*

HALIFAX.

The quantity of flour used here is small, but of the best quality. The standard of living is about the same as in New England. The question of readiness to use our flour is only one of price.

As facilities for exchange on Boston and New York are easy, and shipping facilities also excellent by coasters, steamers, and rail, I see no obstacle in the way of increasing importations of those articles except the duties.

The following is an official statement prepared by Mr. Thomas Cardwell, statistical clerk in the custom-house at this port, of the importation of American wheat flour and wheat into Halifax for 1891, 1892, and 1893:

Year ending June 30—	Wheat flour.		Wheat.	
	Quantity.	Value.	Quantity.	Value.
	Barrels.		*Bushels.*	
1891	625	$2,729	20	$34
1892	2,948½	13,242	40	52
1893	14	58	10	13

DARIUS H. INGRAHAM,
Consul-General.

HALIFAX, *January 8, 1894.*

* Answers to the circular were also received from the consulate at Yarmouth and from the agencies at Liverpool and Lunenburg.

NORTHERN NOVA SCOTIA.

STANDARD OF LIVING.

The standard of living in this consular district—northern Nova Scotia and Cape Breton—compares favorably with that in as sparsely settled parts of New England; and the people are ready, I think, to use American flour; or, to give the answer of the United States consular agent at Cape Canso, "The people are ready to eat American flour when they can purchase it as low as Canadian flour." To this question the consular agent at Sydney, Cape Breton, a large mining district, answers simply, "Yes." The reply of the consular agent at Port Hawksbury and Mulgrave, on the Strait of Canso, is: "Under the present import duty they are not."

The whole question as to the people of this district consuming American flour seems to be summed up in the reply of the agent at Cape Canso: "They will eat it when they can buy it as cheaply as they can buy Canadian flour." I will add that they will buy a great deal of it when they can get it a little cheaper than the Canadian article.

QUALITY OF FLOUR CONSUMED.

The quality of flour most used is of the best, although there are also cheap grades sold. The poorer classes here, like those in the United States, appear to want to use the best white flour they can get. On this point the consular agent at Sydney writes that "as to quality of flour, even our mining classes require the highest grades;" and the same can be said of the miners in the county of Pictou, who comprise a considerable part of the consuming class.

AMERICAN FLOUR AND WHEAT.

The quantity of American wheat flour imported into this district in the year ending June 30, 1891, was 68 barrels, 52 of which were entered in the Pictou customs district and 16 in that of Arichat, Cape Breton. The number of barrels imported in the year ending June 30, 1892, was 6, entered at Arichat. The same for 1893 was 4 barrels, also entered at Arichat.

There was no American wheat imported into the district during the years above mentioned, nor were there for the same period any importations of wheat flour from other countries.

The quantity of wheat imported from other countries during this period was 2 bushels, and this was brought here for seed. Comparatively little wheat is grown in this consular district. Consular Agent Burchell, of Sydney, Cape Breton, in speaking of this, says: "No wheat is grown here." This is probably true of nearly all Cape Breton Island and, indeed, of most parts of the entire district.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are good, chiefly through chartered banks.

The facilities for shipping from the United States to this port are in winter by rail only, in summer, by rail and steamer, the latter running to Boston. In great part the facilities for transportation to and from the United States are about the same for the rest of the district. Ports like Cape Canso and Arichat (to which the railroad does not extend), Port Hawksbury, Mulgrave, and Sydney all have weekly steamboat connections with Boston in summer, and often freight comes to those ports from the United States in sailing vessels. Rates on flour from Boston to the Strait of Canso by vessel and boat range from 12 to 16 cents per barrel. Vessels take stone from Wallace and vicinity to the United States and return light. The agent at Pugwash and Wallace says that these vessels would be good freighters and that their managers would be glad to have them bring back American freight instead of returning empty.

OBSTACLES TO TRADE.

To the question, what, if any, obstacles stand in the way of the extension of trade in American flour, the consular agents in this district (all Canadians and all in trade, except one, a banker) unanimously reply: "The Canadian duty." That is, they consider that with the duty removed American flour would be sold as cheaply as, or more cheaply than, Canadian flour. My opinion is that there will be a good market for American flour in this district, especially around Cape Breton and the Strait of Canso, whenever it is sold a shade lower than the home, or Dominion, product. Undoubtedly a considerable amount of our flour would be sold even at the same price as the home article.

There is a great amount of fish sent to the United States from here, which, with prices favorable, would be largely exchanged for our flour, for, as Consular Agent Bain, of Port Hawksbury and Mulgrave, points out, speaking as a provincial and with the import duty as canceled, "our natural exchange for fish would be largely flour."

M. P. PENDLETON,
Consul.

PICTOU, *December 26, 1893.*

ONTARIO.*

BELLEVILLE.

STANDARD OF LIVING.

The standard of living of the people in this district is very similar to that of the same classes in New York State. The people would be perfectly willing to use American flour if it could be procured at the same prices as,

*Answers to the circular were also received from the consuls at Amherstburg, Brockville, Fort Erie, Guelph, Port Rowan, and Trenton. No American flour is consumed in these districts.

or at lower prices than, those charged for the same grades obtained from Canadian wheat.

The flour used here consists of "Strong Baker's," made from Manitoba spring wheat, and "Family," made from domestic winter wheat, in proportions of two-thirds of the former to one-third of the latter.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are first class, as all of the large Canadian banks have branches scattered throughout this district.

The shipping facilities are excellent, as both the Grand Trunk and Canadian Pacific railways pass through this district from east to west, besides steam barges and schooners on Lake Ontario. There are good docks and warehouses at all the ports, with good facilities for loading and unloading vessels and storing the cargoes.

OBSTACLES TO TRADE.

The principal obstacle in the way of an extension of trade in American flour is the tariff. Previous to 1866 probably 50 to 60 per cent of the flour used here was of American manufacture, but the abrogation of the reciprocity treaty cut this trade off. The vessels would load with lumber or other Canadian products for Oswego or other American ports and return laden with American flour. Since that time, however, they have built larger and better mills with modern machinery, and we could hardly expect, under any circumstances, to furnish as large a percentage of the flour used as before. One miller—Mr. Charles Smith, of Campbellford, Ont.—has lately purchased two carloads of hard spring wheat in Chicago as an experiment. It cost him, laid down at his mill, about the same as Manitoba wheat (including the duty); but he says the result was unsatisfactory, as the flour was not of as good color as that made from Manitoba wheat, nor was it as strong a flour. The freight charges, however, were in favor of the American wheat, as I am told that the Canadian Pacific has a practical monopoly of the carrying trade of Manitoba, while on the American side the competition makes the cost of transportation cheaper.

TRADE OUTLOOK.

I do not think that under present conditions the outlook for extending the market for American flour is at all promising; but it is the opinion of a majority of the larger dealers that were the same conditions existing as in and previous to 1865 our trade in flour with this district would be to a large extent regained, and in this opinion I concur.

M. J. HENDRICK,
Consul.

BELLEVILLE, *December 26, 1893.*

CHATHAM.

No American wheat or flour can be sold here and pay the present duty imposed upon those articles, and none has been imported in years. All the flour used is made here from winter wheat grown in western Ontario, with the exception of a very small amount made from wheat brought from the Canadian northwest. Of the total amount sold, 75 per cent is made by the so-called "patent process."

The facilities for shipping here are of the best—either by one of three railroads or by steamer during the season of navigation. The removal of the duty would admit a certain quantity of spring wheat or flour made from it, as the bakers generally prefer it; but the leading men in the milling business claim that the abolition of the United States duty would admit them to a proportionate share of American trade. They sell their best flour now in carload lots at $2.75 per barrel. Local retailers buy at $3 and sell to consumers at $3.50.

EDWIN F. BISHOP,
Consul.

CHATHAM, *December 19, 1893.*

COLLINGWOOD.

STANDARD OF LIVING.

The standard of living in this consular district is good and very similar to that which prevails in New York, Ohio, Michigan, and other States bordering on the great lakes. The people are ready to consume American flour, provided it is of as good a quality and can compete in price with that obtained in the home market; but the cost, including the duty, prevents its coming into competition with the Canadian product.

QUALITY OF FLOUR CONSUMED.

The quality of flour most used in this district is known to the trade as "straight roller" and "patents."

AMERICAN FLOUR AND WHEAT.

No wheat or wheat flour was imported from the United States or elsewhere into this district during the years 1891, 1892, and 1893.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are excellent and about the same as in the United States.

The facilities for shipping from the United States are good, by both rail and water during the season of navigation, and by direct railroad communication with the United States the year around.

OBSTACLES TO TRADE.

The obstacles in the way of an extension of trade in American flour are the prevailing rate of duty here, the local production, which somewhat exceeds the consumption, and the wheat and flour which are brought here from Manitoba and the Canadian northwest.

There are no prospects for doing a more extensive business in American flour in this country so long as these conditions prevail.

JAMES C. QUIGGLE,
Commercial Agent.

COLLINGWOOD, *January 3, 1894.*

HAMILTON.

STANDARD OF LIVING.

The majority of the inhabitants of this district, which contains a population of 194,000, are prosperous farmers, whose standard of living is not inferior to that of any agricultural community of like number in New York or Pennsylvania. There are, moreover, eight manufacturing cities or towns in the district, each of which has a population of 1,500 or more—one of them has 7,500, one 13,000, and the largest 50,000 inhabitants. Among them is found a large number of skilled artisans, who are given regular employment at remunerative wages and who occupy comfortable dwellings and habitually consume food of good quality. The people of this district are quite ready to make use of United States flour, provided they can obtain it of grades equal or superior in quality to those of Canadian flour and at a somewhat lower price.

QUALITY OF FLOUR CONSUMED.

The first and second grades of spring-wheat flour, known as "Manitoba flour," are most used. Of this flour the bakers in making bread generally use a proportion of two-thirds with one-third of Ontario winter-wheat flour, but farmers and others who habitually bake their own bread employ a larger proportion of the latter.

AMERICAN FLOUR AND WHEAT.

In order to obtain the data to answer questions 3, 4, 5, 6, 7, and 8 of the circular, I have applied to the collector of customs at each of the five ports of entry in this consular district. The collector of customs at Hamilton has informed me that no wheat flour from the United States or from any other country was imported through his port of entry during the years ending June 30, 1891, and June 30, 1892, but that half a barrel of flour was imported from the United States during the year ending June 30, 1893, for the purpose of making certain special bread for the use of Hebrews in their religious observances. He has furthermore stated that one barrel of cracked wheat was imported from the United States specially, on private account,

during the year ending June 30, 1891, and that 6 bushels of United States wheat were imported during that year and 25 bushels from the same country during the year ending June 30, 1893. These two lots of 6 bushels and of 25 bushels of wheat were imported, he believes, for use as seed. No wheat was imported from other countries through the port of Hamilton during the three years in question, nor was any foreign wheat flour or wheat imported during those years through the ports of entry of Berlin, Galt, Paris, or Brantford, Ontario, with the exception of 950 barrels of flour imported from the United States through the port of Brantford during the year ending June 30, 1893. It appears, upon investigation, that this importation consisted of a lot of damaged flour purchased at a very low price for the purpose of manufacturing starch therefrom, and that its damaged condition and the low price at which it was bought admitted of its importation at a comparatively small cost to the importer, notwithstanding the high rate of duty on flour.

EXCHANGE AND SHIPPING FACILITIES.

The facilities in this district for monetary exchange are excellent. There is in almost every town or city of Ontario containing 1,500 inhabitants or more a branch bank of one of the seven great banking institutions of Canada, of which the head office is located at Montreal, at Toronto, or at Hamilton, with the exception of the Bank of British North America, the head office of which is in London, England. These banking institutions are universally regarded as unusually strong, on account of careful management and strict supervision. The smallest of them has a paid-up capital of $1,200,000 and the four largest a paid-up capital of $6,000,000 each. All of the branches in Ontario of these great banks maintain correspondence and transact exchange business through their respective head offices with prominent banks and bankers in nearly all sections of the United States.

The facilities for shipping from the United States are very ample both by railroad and steamship. The Grand Trunk Railway, of which the principal branch runs from Port Huron, Mich., to Suspension Bridge, N. Y., has many lateral branches throughout this consular district, which greatly facilitate the distribution of merchandise from the western section of the United States, where the largest quantity of flour and the best quality thereof are produced. The Canadian Pacific Railway also affords transportation for merchandise from the northwestern States of the Union to the towns of Galt and Milton, in this district, where it crosses the Grand Trunk Railway and where such merchandise can be transshipped to the latter railway for distribution throughout this consular district. Goods can also be forwarded by steamship from ports on Lake Superior, Lake Michigan, or Lake Huron to Collingwood, Ontario, a port on the last-named lake, and thence by the Grand Trunk Railway to all parts of Ontario, or they may be sent by steamship through the lakes above mentioned and through Lake Erie and the Welland Canal to Hamilton, the chief and largest city in this district, for distribution.

OBSTACLES TO TRADE.

The great and only serious obstacle in the way of the extension of trade in American flour in this district is the customs duty imposed by the Dominion of 75 cents per barrel on flour and 15 cents per bushel on wheat.

TRADE OUTLOOK.

The wholesale price in this market for Manitoba flour made from spring wheat and commonly termed here "strong flour" is from $3.50 to $3.80 per barrel. The wholesale price for flour from winter wheat is $2.60 to $2.75 per barrel. This flour is made from Ontario wheat.

The latest quotations accessible here of the wholesale prices in the Chicago market are from $3.80 to $4.15 per barrel for flour from spring wheat and from $3.25 to $3.50 per barrel for flour from winter wheat. It will be observed that the above quotations indicate that the price of each of the two grades of flour in question is somewhat less at present in this consular district than at Chicago, but millers and consumers of flour here allege that the Manitoba spring-wheat flour is equal in all respects to that of Minnesota, and that the flour from Ontario winter wheat is as good as the American wheat flour. Furthermore, the payment of the duty imposed on American flour imported into Canada would add 75 cents per barrel to the price of the flour as quoted at Chicago when the same is received by an importer in Ontario. Under these circumstances it would seem that "the prospects for doing a more extensive business in American flour" in this section are not good.

C. F. MACDONALD,
Consul.

HAMILTON, *January 11, 1894.*

KINGSTON.

The standard of living in this district is high, and the quality of flour used is good.

From June 30, 1891, to the present time only one carload of American flour has been imported into this district; with that single exception, all flour used since that date has been from Canadian wheat ground in Canadian mills.

Facilities for monetary exchange and shipping are superior.

During this season the average transportation rate on grain from Port Arthur, Manitoba, has been but eight-tenths of a cent more than the rates from Duluth or Chicago. Against this difference is the price of wheat in favor of the Canadian product and the tariff of 15 cents per bushel on wheat and 75 cents per barrel on flour.

The people are ready to eat American flour if it can be given to them better or cheaper than the Canadian article.

Under present circumstances the outlook for placing American flour upon this market is not favorable.

M. H. TWITCHELL,
Consul.

KINGSTON, *December 20, 1893.*

OTTAWA.

The standard of living in Canada is practically the same as in the United States, and the same quality of flour is used.

Canada is essentially a wheat producing and exporting country, and the importations of American wheat and wheat flour are only nominal. During the fiscal year ending June 30, 1892, the last for which official figures are in print, Canada imported 66,113 bushels of wheat, of which 66,105 bushels came from the United States, and 36,559 barrels of wheat flour, of which 34,338 barrels came from the United States. During the same year Canada exported 8,714,154 bushels of domestic wheat, of which 1,489,881 bushels were sent to the United States, and 380,996 barrels of domestic wheat flour, of which 3,998 were for the United States.

The facilities for monetary exchange and for shipping are practically the same as in the United States.

The obstacles in the way of extending the trade in American wheat and flour in Canada are mainly twofold—the import duty and the fact that Canada can and does produce these products quite as cheaply as the United States. For these reasons, and especially the latter, the use of American wheat flour can only be local and occasional.

JOHN B. RILEY,
Consul-General.

OTTAWA, *December 28, 1893.*

PORT SARNIA.

This is an agricultural district. They export from here large quantities of wheat to the United States, so it would be difficult to extend the market for American wheat flour here. There was no American wheat flour imported into this district in the years ending June 30, 1891, 1892, or 1893, and no American wheat during the same period. There was none from other countries during the above years.

The facilities for monetary exchange are good, and the facilities for shipping from the United States to this port are also good.

The greatest obstacle in the way of the extension of trade in American flour is the duty.

ARTHUR M. CLARK,
Consul.

PORT SARNIA, *January 8, 1894.*

WINDSOR.

The standard of living in this province is identical with that of the same classes in the United States. The people do not need to buy American wheat or American wheat flour, for they raise a surplus which is exported; yet Manitoba finds a market here for its grain, by special rates with the Canadian Pacific Railway, and that grade of flour is now sold in this market at $3.25 (retail) for A No. 1, which is equal to our best Minnesota (or said to be).

All grades are used, but choice spring is most in favor.

Money exchanges are freely made at rates current in the United States.

Facilities for shipping are unsurpassed, both by water and rail, in every direction.

The only obstacles in the way of extending the trade is the tariff.

MARSHALL P. THATCHER,
Consul.

WINDSOR, *December 26, 1893.*

QUEBEC.*

MONTREAL.

STANDARD OF LIVING.

Wheat flour is generally used, and in the country districts its use is probably more universal than even in the United States, there being very little bread made from flour or meal of other cereals.

QUALITY OF FLOUR CONSUMED.

The quality of flour which seems to be in greatest demand is stated to be what is termed "Strong Baker's," although the "Patents" and "Straight Roller" are largely used. I am informed that the greater proportion of all manufactured for consumption here is ground from hard Manitoba wheat, while the quantity of Ontario fall-wheat flour consumed is very small.

The grading of flour is much the same as in the United States, and it is usually sold on the reputation of the mills rather than any government inspectors, as I am informed.

AMERICAN FLOUR AND WHEAT.

A Chicago firm formerly doing some business in Canada stated that their most popular selling grade in this country, especially in Toronto, Montreal, and Quebec, was what they termed a spring wheat bakers' flour, which was "used extensively in what is called the bakers' mixture."

*The consuls at Coaticook and Gaspé Basin report that no American flour is received in their districts.

The quantity of wheat and flour imported from the United States into the port of Montreal for the past three years is given in the following table, and also the amount of the same imported for consumption:

Year ending June 30—	Total imports.		For consumption.	
	Wheat.	Flour.	Wheat.	Flour.
	Bushels.	*Barrels.*	*Bushels.*	*Barrels.*
1891	2,453,647	15,272	40,962	9,459
1892	4,936,470	19,291	42,094	6,512
1893	4,110,229	21,096	1,825	4,005

Prior to the year 1890 the import duty on wheat was 15 cents per bushel and 50 cents per barrel on flour, and even with this restriction a small trade in flour for consumption was possible; but in March of that year the duty was increased to 75 cents per barrel, and that increase seemed to have the effect of closing this market to the United States.

The Chicago firm already referred to informed me that on the basis of 50 cents duty per barrel they were able to compete, to some extent, with Canadian millers throughout Ontario, Quebec, and the lower provinces, and, although the margin was small, they were able to do business, working closely; but after the increase to 75 cents they were entirely shut out.

The imports from the United States for consumption at this port dropped from 81,000 barrels in 1889 to 4,000 barrels in 1893, as will be seen in the following statement of imports for each of the past five years ending June 30:

	Barrels.
1889	80,997
1890	31,216
1891	9,460
1892	6,513
1893	4,006

There is no wheat or flour imported from any other country, and, as shown in this table, but very little of that from the United States is for consumption.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange in this city are equal to demands and to those of cities anywhere of equal size and importance, and that the facilities for shipping from the United States are good, both by rail and water, may be inferred from the figures above (and to follow), showing the quantity of wheat brought to this port during the past few years. The receipts from all points by water are about double the quantity received by rail.

OBSTACLES TO TRADE.

With respect to the obstacles to extension of the trade in wheat and flour and the prospect for doing a more extensive business, it may be stated that the chief and probably sufficient obstacles to extension are, first, the quantity

of wheat grown within the limits of the Dominion, more especially in Manitoba and the Northwest, and, second, the import duty.

The first obstacle is not insurmountable, and, although competition might be sharp, it could be met with a fair degree of success; but the second is substantially prohibitive and places this market entirely beyond the reach of dealers in the United States.

RECEIPTS OF WHEAT AND FLOUR.

The increase in the amount of wheat received at this port for export and consumption is quite noticeable, and that this is owing to increased production in Canada rather than to imports from the United States is clearly shown in the following table of receipts for the past six calendar years:

Years.	Total receipts.	From the United States.	From Canada.
	Bushels.	*Bushels.*	*Bushels.*
1888	5,048,809	1,247,228	3,801,581
1889	3,836,166	2,039,858	1,796,308
1890	4,155,970	2,145,626	2,010,334
1891	8,389,687	4,274,784	4,114,898
1892	11,174,939	4,456,294	6,718,645
1893*	8,257,094	934,106	.....

*Six months.

The receipts of flour during the same period were as follows:

Years.	Total receipts.	From the United States.	From Canada.
	Barrels.	*Barrels.*	*Barrels.*
1888	933,121	66,223	866,898
1889	968,876	59,481	909,395
1890	978,843	28,870	949,973
1891	1,153,421	18,062	1,135,359
1892	986,888	10,285	976,603
1893*	795,286	16,781	.....

*Six months.

WENDELL A. ANDERSON,
Consul-General.

MONTREAL, *January 6, 1894.*

QUEBEC.

STANDARD OF LIVING.

The standard of living in this district is fairly good in the towns and cities, but in the rural districts it is not so good.

The flour used by the people in the rural districts is of a very inferior quality as compared with that used by the people in the towns and cities.

Flour, pork, molasses, and tea are the principal supplies sent from this city to the rural inhabitants.

IMPORTS OF FLOUR AND WHEAT.

The quantity of American wheat flour imported during the years ending June 30, 1891, 1892, and 1893, was as follows:

	Barrels.
1891	2,115
1892	1,987
1893	1,768

This shows a decrease in each year. This is owing to the heavy duty imposed; besides, the freight rates are heavier than those imposed on flour from Ontario.

American wheat flour would no doubt be in great demand, as it is very popular here, were it not for these drawbacks of duty and freight. The imports of American wheat flour named above are the finest grades of flour only.

No American wheat was imported into this district, and only 6 barrels of British wheat were imported in 1892; none since. No wheat flour is imported from other countries.

SHIPPING AND EXCHANGE FACILITIES.

The shipping facilities of this district are exceptionally good via rail and water. The following railways center in Quebec: The Grand Trunk, Canadian Pacific, and Quebec Central, all connecting with American railways, east and west. The water route of the St. Lawrence and its canals is well known.

The facilities for monetary exchange are good.

PHILIP B. SPENCE,
Consul.

QUEBEC, *January 10, 1894.*

SHERBROOKE.

STANDARD OF LIVING.

The living in this district is generally good, and the people would buy and use a great deal more American flour than they do if they could buy it as cheaply as, or more cheaply than, Canadian flour that comes from the northwest of the Dominion of Canada.

QUALITY OF FLOUR CONSUMED.

The grade of flour mostly used in this district is the "Strong Baker's," which comes from Manitoba. There are some other grades of flour, such as the "Hungarian," sold in this district, but the "Strong Baker's" is the most extensively sold.

AMERICAN FLOUR AND WHEAT.

There were 152 barrels of American flour imported into this district in the year ending June, 1891, 30 barrels in the year ending June, 1892, and 311 barrels in the year ending June, 1893.

There was no American wheat imported in the district during 1891, 1892, and 1893.

There was no wheat flour, nor any wheat, imported into this district from other countries during the same period.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are very good, and the facilities for shipping from the United States to this port are also very good by railway.

OBSTACLES TO TRADE.

The only obstacle that I can see to the extension of trade in American flour is the duty of 75 cents per barrel that the Canadian Government imposes upon American flour. If that duty were reduced, there is no doubt but there would be a large increase of trade in American flour in this district. I have talked upon the subject to different flour merchants here, and they all say that they would like to handle the American flour if they could buy it more cheaply than, or even as cheaply as, Canadian flour.

BENJAMIN LENTHIER,
Consul.

SHERBROOKE, *January 8, 1894.*

ST. PIERRE, MIQUELON.

The standard of living here is comparatively high. The population is composed chiefly of the laboring class, and large quantities of bread, most of which is made of American flour, are consumed. The quality used is good, strong, spring-wheat flour.

The imports of flour during the years ending June 30, 1891, 1892, and 1893, were as follows:

Kinds.	1891.	1892.	1893.
	Barrels.	*Barrels.*	*Barrels.*
American	13,000	19,000	18,000
Canadian	4,000	3,000	6,000
Total	17,000	22,000	24,000

Wheat is not imported.

Exchange is effected through the Banque des Isles St. Pierre and Miquelon and its agencies in New York and Boston.

A freight steamer, plying between Halifax and St. Pierre as a mail steamer, and having freight accommodation for about 3,500 barrels, extends her trips to Boston once a month during spring, summer, and autumn. Freights in the latter case are the same as from Halifax.

There are no obstacles in the way of the extension of the market for American flour here. With the opportunities offered by regular direct shipments from Boston—which service has only been in existence since August, 1893—I am of the opinion that American flour should take the place of all other flour here and fully supply the market, as it is considered better and more suitable than the Canadian flour.

GEORGE J. STEER,
Commercial Agent.

ST. PIERRE, *March 14, 1894.*

AUSTRIA-HUNGARY.

The Empire of Austria-Hungary grows so much wheat that but very little wheat flour is imported, the principal import of breadstuffs being rye flour, which finds ready sale on account of its cheapness. The larger part of the Austrian population being poor and heavily taxed, there is but a limited market for flour of the better grades, and this is supplied by the home product.

In the Austrian cities flour of the better quality is consumed, but in the country bread made from rye or the lower grades of wheat flour is in general use.

During the years 1891–'93 the imports of flour and wheat into Austria-Hungary were:

Year.	Flour.	Wheat.
	Met. cent.	*Met. cent.*
1891	26,039	914,373
1892	18,912	1,190,286
1893	8,327	1,314,991

These figures are complete except for the year 1893, in which the returns for December have not yet been published.

The Government only furnishes statistics on the total import of flour, and it is consequently impossible to tell the exact amount of wheat or rye flour imported.

The duty on wheat flour is 3.75 florins in gold* per 100 kilograms (220 pounds). On wheat the duty is 1.50 florins in gold per 100 kilograms. The import duty on wheat and flour is the same for all foreign countries with the exception of Servia, which pays only 0.75 florin per 100 kilograms.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange between Austria and London, Paris, and Berlin are excellent; but there is so little business done with the United States that the facilities therewith are not good. Even the official daily Cours-Blatt does not give New York exchange.

The facilities for shipping from the United States to Austria-Hungary are not the very best. Trieste and Fiume are the only seaports of this Empire. The Austrian Lloyd Steamship Company has a regular line of freight steamers plying between New York and Trieste, and it is possible

*1 florin in gold (new)=40.6 cents; 1 florin in gold (old)=48 cents, the coin in which duty is paid at present.

to ship grain via Germany; but the rates are higher from the United States than from the countries from which Austria imports grain.

OBSTACLES TO TRADE.

The greatest obstacle to the extension of the trade in American wheat with Austria-Hungary is the fact that Austria-Hungary is an agricultural country and produces more wheat than it consumes. The milling industry, especially in Hungary, is conducted on a large scale. With the high protective tariff of Austria and a long journey, it is practically impossible for American flour to compete under ordinary circumstances. The duty on wheat is relatively lower than on flour, and in case of bad crops it might be possible to export some of the cheaper grades of wheat. In this case, however, the United States would have to compete with Russia, which is so dependent upon the money received from foreign sources for its agricultural products that even during the famine of 1892 large amounts of wheat were exported.

As the duties on goods entering Austria are paid in gold, which is at a premium of 25 per cent, it is difficult to import any but the most necessary articles.

MAX JUDD,
Consul-General.

VIENNA, *January 26, 1894.*

BOHEMIA.

PRAGUE.

WHEAT FLOUR.

The principal food of the people in my district is flour—wheat and rye. The aim of those buying flour is to purchase it at the lowest possible rates, regardless of its origin. The cheaper grades of flour are used by the rural and industrial classes and the finer qualities in small proportions in cities. No American flour is imported into this district.

Bohemia manufactures a good deal of flour from its home-grown wheat, but the amount is not enough to meet the home demand. The deficiency is chiefly supplied by Hungary. Hungary is a large wheat and flour producing country, the largest flour mills being in Buda-Pesth, distant 375 miles from this city, the principal flour market of Bohemia.

The Hungarian millers supply flour at cheaper rates than the Bohemian millers can manufacture it at the present prices of wheat. A suspicion exists among the Bohemian millers that the Hungarians are buying wheat at low prices from Roumania, Servia, and southern Russia, without paying any duty thereon, by certain manipulation, which is explained more particularly in the following translation of an interpellation by one of the members of the

Bohemian Diet, made on January 8, 1894, in behalf of the millers of his country:

A committee of the millers' association met at Vienna last November, where the supposition was expressed that the competition of the large Hungarian flour mills against our home establishments is supported and facilitated by the excessive use, if not by the abuse, of the so-called "refining process," according to which system enormous quantities of Russian and Roumanian wheat, and also wheat from the Balkan states are shipped to the Hungarian flour mills to be manufactured into flour. This matter was also thoroughly discussed at the last meeting of the members of the Chamber of Commerce at Prague, which body came to the conclusion that the excessive use of the bounty on flour by the Hungarian mills is the principal basis of their competition. As a result the large Hungarian mills sell their products in our markets at an average of one florin (40.6 cents) per 220 pounds cheaper than our home mills can produce. If from these low prices 20 to 30 kreutzers (8 to 12 cents) are deducted on account of the present low freight rates, there still remains a difference of 70 to 80 kreutzers (28 to 33 cents) per metrical centner (220 pounds) in their favor. Taking this calculation as a basis (Buda-Pesth price current of flour, farina, and bran), we find that 100 kilograms (220 pounds) of wheat, of which a hectoliter (2.8377 bushels) has a weight of 78 kilograms, will yield 8.89 florins ($3.61) worth of mill products. From this amount must be deducted the agent's commission, the usual discount from the bill, and the expense for packing, which altogether amount to at least 75 kreutzers (30½ cents), leaving 8.14 florins ($3.30½) net. The metrical centner of wheat of 78 kilograms per hectoliter costs 7.90 florins ($3.20¼), so that the difference between the raw material and the manufactured product is only 24 kreutzers (9¾ cents). Inasmuch as the annual reports of the Hungarian millers show that one metrical centner of wheat costs 1.10 florins (44.6 cents) to manufacture into flour, there is here a problem which in the interest of our home industry calls for a thorough and satisfactory explanation.

It is a well-known fact that the Hungarian flour stock companies do not work at a loss; on the contrary, they pay their shareholders and managing committee large dividends, so that a conclusion can be drawn that those large mills manufacture the raw material at cheaper rates than the home wheat can be purchased in the Buda-Pesth market. It is also remarkable that, according to statistical data, the import of Roumanian, Servian, and Russian wheat is steadily increasing, which fact is shown by the Hungarian official statistics, namely:

The export of Hungarian flour to Austria proper in the year 1882 was 1,579,000 metrical centners; to foreign countries, 1,336,000 metrical centners; but in the year 1892 we find that the export of Hungarian flour to Austria proper reached 4,017,000 metrical centners, whereas the export to foreign countries amounted to only 955,000 metrical centners.

But more remarkable still is the fact that as the export of Hungarian flour to Austria proper increases, the import of wheat from the Balkan states increases in like proportion in consequence of the refining process—the ministerial decree of May 29, 1882, permitting grain from foreign countries to be imported free of duty for the purpose of being ground in the home mills, provided the flour made from the duty-free grain is reshipped across the frontier within a specified time. In consequence of this, the amount of grain imported free of duty in 1882 amounted to 57,000 metrical centners; in 1884, 254,000 metrical centners; in 1890, 455,000 metrical centners; and in 1892, 1,323,000 metrical centners. From the figures quoted, we notice that the export of Hungarian flour to foreign countries is declining, while the exports to Austria proper are rapidly increasing; also, that the import of the duty-free grain is increasing. If the export capability of the Hungarian mills is caused by the import of the duty-free grain from foreign countries, the result would be an increase and not a decrease of the export to foreign countries; but the increase of the export of Hungarian flour to Austria proper and the decline of the export to foreign countries go to prove the supposition that the flour made of the duty-free foreign grain (a much cheaper raw material) is that which comes into competition in our markets. Attention is also called to the fact that the flour which is

destined for foreign countries—for England, Holland, Belgium, etc.—must be, in view of the transoceanic competition, of the finest quality; and yet hardly more than 30 per cent of such flour can be obtained from the raw material, the rest remaining for home consumption. The Balkan grain is inferior in quality, and 30 per cent of first-class flour can not be obtained from it; consequently flour made therefrom can not be used for the foreign trade.

It can therefore be positively asserted that the flour which is exported to foreign countries is made from Hungarian wheat (which is superior in quality), whereas the flour made from the "duty-free" wheat is thrown into our markets, causing an insuperable competition to our home establishments. No proof of identity is required, and the term which is fixed for giving to the exporter a bounty on flour is extended to suit the Hungarian mills. What such an advantage means every business man can easily comprehend. The bounty system as it is practiced now by the Hungarian mill-owners is contrary to that which was contemplated by the protection to grain at the time the bill was introduced. We now see that the large Hungarian mills only are benefited thereby, because it enables them to buy cheap grain and realize bounty on the flour they export to foreign countries. The tariff law expressly requires proof of identity and makes all refining methods dependent on such proof by stating that articles may be imported into this country without paying any duty within the limits of the refining process, but fixes a time within which the flour manufactured therefrom must be exported to foreign countries. It is only when exported that the identity of the imported raw material can be proved.

The quality of flour is divided here into nine grades—Nos. 0, 1, 2, 3, 4, 5, 6, 7, and 8, and the following wholesale prices are charged at Buda-Pesth per 100 kilograms (equivalent to 220 American pounds):

Grade.	Price.	Grade.	Price.
0	$5.27	5	$3.90
1	5.03	6	3.49
2	4.71	7	2.88
3	4.34	8	2.19
4	4.06		

The freight from Buda-Pesth to Prague per carload amounts to 51 cents per 220 pounds.

How much flour is yearly imported into Bohemia it is impossible to state, because there are no statistics nor records of any kind kept. I tried to ascertain an approximation thereof from the wholesale dealers, but failed.

DUTY ON FLOUR.

The duty on wheat flour into Austria-Hungary is 3.75 florins in gold ($1.80) per 100 kilograms (220 pounds).

WHEAT.

Wheat is imported into Bohemia only from some of the Austro-Hungarian states—Moravia, Hungary, etc. In 1892, according to the statistical records of the agriculture department of Bohemia, of all the tillable soil in Bohemia 97.39 per cent was sown or planted and 2.61 per cent left fallow. Of the soil devoted to grain, wheat occupied 42.4 per cent, and yielded 4,906,000 hectoliters (13,921,756 bushels). The present price of wheat per 100 kilograms is from $3.29 to $3.65.

The import duty on wheat is 1.50 florins (72.3 cents) in gold per 100 kilograms. The duty on flour and wheat imported into Austria-Hungary is uniform, no exception being made.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange here are excellent. In the city of Prague there are five large banking institutions, with branches in the larger cities of Bohemia, which have direct communication with banking houses in the United States. There are also several smaller banking firms doing direct foreign-exchange business.

Shipping communication between the United States and Bohemia can be conveniently effected only via Hamburg and Bremen, which ports are connected with the capital city of Bohemia (Prague) by railway and by navigable river. The distance from Hamburg to Prague is 661 kilometers (413 miles) and from Bremen 692 kilometers (433 miles).

Freight rates by both rail and water from Hamburg and Bremen to Prague per carload of 100 metrical centners (22,046 pounds) is as follows:

From—	By water.	By rail.
Hamburg	$23.80	$56.64
Bremen	30.94	58.31

OUTLOOK FOR TRADE.

It rests with the American millers to decide whether they can place their wheat flour on Bohemian markets at as cheap rates to the consumer as other millers do. I am satisfied that if American wheat flour could be furnished to the consumers here at the same price as others furnish it, considerable business could be done. I am also satisfied that cheaper grades of flour would sell better in this country than the finer qualities.

JOHN KAREL,
Consul.

PRAGUE, *February 12, 1894.*

REICHENBERG.

Northern Bohemia is known as the most populous district of Austria-Hungary, and the consumption of flour is therefore extensive.

As the entire country is very mountainous, agriculture is in an inferior state of development. It is a well-known fact, however, that the most important manufacturing interests of Austria are located in northern Bohemia, and consequently the greater part of the population consists of workingmen.

American flour has never been imported into northern Bohemia, nor will it ever be under existing conditions.

Only a few decades ago the milling interests of northern Bohemia were of considerable importance, but this branch of business has been almost driven out of existence by the competition of Hungary, and is now carried on only on a small scale.

Hungarian millers completely control the flour and wheat market of Austria, and hence of northern Bohemia; and it is impossible for the few mills yet in operation to compete with the production of Hungarian mills. It is well understood by those who pretend to be posted, that it is only a question of a very short time when mills still in operation here must shut down forever.

The amount of wheat now ground in this district is very insignificant.

QUALITY OF FLOUR USED.

The quality of wheat flour used here is principally of a fine grade, and for this reason northern Bohemia seems to be the field sought by Hungarian millers, as their lower grades of flour are used at home.

IMPORTS OF FLOUR AND WHEAT.

The import of flour from other countries has entirely ceased in northern Bohemia since the duty on it was established. Importing flour would not pay because the duty is too high.

A few years ago large quantities of American rye were imported into northern Bohemia by the way of Hamburg, but the increase of duty on grain and the low prices of grain throughout Europe have shut out this import.

A further obstacle in the way of cheap transportation and the counteraction of the high duty is the extraordinarily low state of the water in the River Elbe for the past few years, which has prevented the utilization of this route for shipping purposes from Hamburg to Bohemia.

C. HUGO JACOBI,
Consul.

REICHENBERG, *January 17, 1894.*

BELGIUM.

STANDARD OF LIVING.

The people in this consular district (Brussels) eat equal proportions of bread and potatoes, potatoes occupying as high a valuation in public estimation as bread. The people are ready to eat American flour, provided it can be purchased at advantageous figures.

The average price of wheat, irrespective of origin, in the markets of Belgium during the month of October, 1893, was $2.85 per 220 pounds.

The best quality of flour is most used.

It is impossible to specify the amount of American wheat flour imported into this district in any year, as flour is not reported separately in the Belgian statistics. Flour, bran, alimentary feculas, and meslin of all sorts are classed under one head. Thus during the year ending June 30, 1891, 38,736,651 pounds of flour, bran, alimentary feculas, and meslin were imported into Belgium from the United States, 51,818,428 pounds in 1892, and 47,322,598 pounds in 1893.

Wheat is not reported separately in the Belgian statistics, wheat, spelt, and meslin being classified under one head. I am informed that the statistics really concern wheat, as very little spelt or meslin comes from the United States. During the year ending June 30, 1891, 236,058,842 pounds of wheat, spelt, and meslin were imported into Belgium from the United States, 1,230,534,423 pounds in 1892, and 608,886,801 pounds in 1893. The quantities of milled cereals (wheat, spelt, and meslin) imported into Belgium from other countries during the years ending June 30, 1891, 1892, and 1893, were as follows:

	Pounds.
1891	16,696,334
1892	150,251,833
1893	132,913,787

The quantities of cereals (wheat, spelt, and meslin) in bulk imported into Belgium from other countries during the periods above mentioned were:

	Pounds.
1891	2,170,579,873
1892	1,667,185,126
1893	1,506,393,691

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are through the banks. Payments are by draft at thirty, sixty, or ninety days. The rate of exchange varies from 5.17 to 5.30 francs to the dollar. Goods arrive by vessel from the United States and are distributed to the interior by railroad and canal.

TRADE OUTLOOK.

As far as I am able to learn, there are no obstacles in the way of the extension of trade in American flour in this consular district. From information gathered in conversation with importers, I find a general preference for American wheat and wheat flour, and a desire to increase its consumption. This increase can be accomplished if our products placed upon the Belgium markets equal or exceed in quality the European wheat and wheat flour and are sold at the same price.

DUTIES.

There is no duty on wheat and flour coming into Belgium.

GEO. W. ROOSEVELT,
Consul.

BRUSSELS, *January 5, 1894.*

ANTWERP.

STANDARD OF LIVING.

The standard articles of food in the consular district of Antwerp are bread, potatoes, and beer.

QUALITY OF FLOUR USED.

Practically all the bread consumed in Belgium is made of wheat flour, which is largely manufactured in Belgium, though it is also imported from other countries, and principally from the United States.

The Belgian flour is milled from wheat grown in part in Belgium, but chiefly imported.

IMPORTS OF FLOUR AND WHEAT.

The following table shows the imports of flour at Antwerp for the calendar years indicated:

From—	1892.	1891.	1890.
	Sacks.	*Sacks.*	*Sacks.*
United States	285,400	334,585	211,806
Canada	5,646	15,001	.....
Argentine Republic	24,002	3,436	27,715
India	27,771	4,704	1,694
Australia	226	280	4,160
Black Sea and Danube	2,827	13,598	7,339
Prussia and Pomerania	65,097	82,911	90,882
Italy	222	7,146	.....
Hungary	160	1,440	.....
Russia	.....	56	954
Hamburg and Bremen	1,459	32,149	24,087
France	1,689	1,666	724
England	18,550	9,962	4,229
Total	433,049	506,928	373,590

It will be observed that the importation from the United States considerably exceeds that of all the others combined.

The following table shows the imports of wheat at Antwerp during the same years:

From—	1892.	1891.	1890.
	*Hectoliters.**	*Hectoliters.**	*Hectoliters.**
England	40,756	44,715	7,290
Black Sea country	41,699	1,570,212	1,226,473
Australia	16,108	24,319	30,316
Canada	125,897	93,304	.....
United States	4,929,039	4,508,852	1,657,075
Denmark	.....	5,218	130
Danube country	4,127,757	5,513,863	5,588,425
Egypt	200,749	427,190	229,956
France	3,391	7,796	9,704
Hamburg	47,594	3,608	.....
Hungary	.....	101,097	.....
India	1,343,965	2,659,448	1,224,284
Pomerania	.....	2,985	13,750
Prussia	625	68,719	53,403
Argentine Republic	2,162,040	2,631,866	1,823,834
Northern Russia	.....	197,577	9,139
Turkey	127,764	226,007	318,092
Chile	.....	37,715	.....
Total	13,166,824	18,034,491	12,202,872

*1 hectoliter=2.838 bushels.

All wheat and flour imported into Belgium are free of duty of any character.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are of the first order. The principal banks in the consular district of Antwerp are Banque Centrale Aurersoise, Banque d'Anvers, Banque Nationale, Banque de Crédit Commercial, Banque de Commerce, and H. Albert de Bary & Co., all of the city of Antwerp and all thoroughly reliable and of the first rank.

The facilities for shipping from the United States are the best. The Red Star line, the Wilson line, the Puritan line, and others, are, I should suppose, too well known to American exporters to necessitate details as to names, service, dates and places of departure, etc.

TRADE OUTLOOK.

The question as to American millers doing a more extensive business in this consular district and in the Kingdom of Belgium is not easily answered. The United States already furnish about three-fifths of all the flour coming to the port of Antwerp. This practically means Belgium itself, because Antwerp is the chief Belgian port, and it is not unfair to assume that the proportion will not be materially changed by such quantities as enter other Belgian ports.

Figures showing the relative consumption of Belgian-made flour and that of flour coming from other countries are not at hand. I learn that such

figures exist, but my efforts to secure them have been unsuccessful. It is known, however, that the Belgian mills, notably those of Lourain, turn out large quantities of flour, and it does not seem probable that the importation of the American product can be materially increased without such inducements in the matter of price as would overcome the output of the Belgian mills. These mills are strong, long established, with ample capital, and work harmoniously.

The fact that the United States are now supplying three-fifths of the entire import would seem to indicate that organized effort on the part of American millers would result in a substantial and steady increase of their Belgian sales.

The retail flour trade would not be difficult to reach. As bread, cakes, pastry, etc., are almost entirely bought by the consumer from the baker, there is very little sale of flour to the family, and the necessity for every grocer to keep flour in small quantities does not exist as in the United States.

Many of these bakers use American flour, bought directly from the jobber, and the greater part of those who do not follow this custom buy directly from the Belgian miller.

The bakers, then, are the people to be reached, and a systematic, determined effort to that end would undoubtedly bring good results.

HARVEY JOHNSON,
Consul.

ANTWERP, *February 24, 1894.*

FLANDERS.

STANDARD OF LIVING.

The people of the two Flanders are divided by class distinction into three different groups—the nobility, the *bourgeoisie*, and the working people. Respecting the character of food eaten, the two first-mentioned divisions do not materially differ. They consume the best food which their means permit and which the markets afford. The opportunity to obtain a variety of articles is as good as, if not better than, in other parts of Europe. The market supplies here would be considered fair even in the United States. Owing, however, to the density of population, prices are higher than in other localities on the Continent.

The working people, in turn, consist of two classes—those residing in cities, mostly employed in factories, and those living in the country, engaged in agricultural labor. This consular district, composed of the two Flanders, is the center of vast industries. Fully one-third of the inhabitants of East Flanders are employed in factory labor. The proportion in West Flanders is not so large, but is at least one-fourth. These factory hands generally earn sufficient to feed and clothe themselves comfortably, but they never are able

to indulge in the least luxury. Their nourishment consists chiefly of potatoes, vegetables, soup, and bread. Fish also is greatly used, but meat in very small proportion. The price of all kinds of food consumed by this class is cheaper, and often the quality is second or third rate. Even among domestic servants a partial custom is prevalent to give them different food from that eaten by the family. It is frequently of inferior quality.

The agricultural laborers probably fare the worst. Their food consists mostly of potatoes, considerable bread, and large quantities of buttermilk. Meat is very rarely eaten. That eaten is only the smoked fatty portions of pork which they are able to procure. They generally hire out by the day, week, or month for a certain sum in addition to their daily food supply. A field laborer earns about 75 centimes (15 cents) per day, with his food added. Their condition has, however, vastly improved in the past few years.

QUALITY OF FLOUR USED.

In every respect there is much less variety existing among people of the same means than in the United States. If you belong to a certain class, you will eat the same as your fellows. All bread is made by bakers. It is exceptional to bake bread or biscuit in one's own kitchen. The baker supplies all and always of uniform character. There is as much style in bread as in dress. What your neighbor eats, you must eat. At Ghent this fact is particularly true. Questions of politics and of bread are mixed. There are in this city three large coöperative bakeries known as "Vooruit," "Volksbelang," and the "Etoile du Nord." They supply three-fifths of the bread consumed. If you are a socialist, you will buy your bread from the "Vooruit;" if an antisocialist, from the "Volksbelang;" and if you wish to hide your political affiliations you patronize the "Etoile du Nord."

There are, of course, numerous private bakers, but none of great importance. Their clientage is composed of the richer classes, of their particular friends, and of transient trade. The bread furnished by the coöperative societies is probably as good as that made by the private bakers and sells for about two-thirds of the price asked at the smaller shops.

It may generally be said that the people eat mostly wheat bread, though there is some little brown bread used. In the villages the proportion is half wheat and half rye bread. In the country people generally eat rye bread, but frequently the farmers used bread made of a flour resulting from the grinding or crushing of wheat without any further cleansing or preparation. In the cities the *bourgeoisie* consume little bread, not exceeding daily one pound per individual. A workman eats at least 2 pounds of bread per day. The quality of the flour employed by the coöperative societies is mostly 00 (double zero), which is a good mean. The bread manufactured from this brand is sold by these societies at 18 to 20 centimes (3½ to 4 cents) per loaf of one kilogram (2 pounds). The private bakers use a better quality of flour, worth 1 to 3 francs (20 to 60 cents) more per sack of 100 kilograms (200 pounds) and sell the bread at 26 to 32 centimes (5 to 6½ cents) per loaf of 2 pounds.

All conditions being equal, the bakers are inclined to use native flour, even though the quality of bread, in our opinion, may not be as good. The people, of course, do not know what they eat; for them it is a matter of indifference, provided the price is reasonable and the bread to their taste.

The Belgians are ready to use American flour if it is good and the price is advantageous. Both the "Vooruit" and "Volksbelang" replied in these terms. The other society did not answer my communication. According to their own statement, the "Vooruit" employs 30,000 sacks of 100 kilograms per year, and the "Volksbelang" 70,000 sacks. The third society is not so important. Both of the former have assured me that they are willing and ready to treat directly with American houses. The "Volksbelang" supplies bread daily to 45,000 people, the "Vooruit" to 25,000 persons. It seems to me that it would pay Americans to open direct correspondence with both these important coöperative societies of Ghent.

The quality of flour most used is that known as "00 native," selling at 17 francs wholesale and 18 francs retail per 100 kilograms. Whether or not sufficient wheat flour is produced in Belgium for consumption is an open question. It is, however, a fact that large quantities of wheat flour from abroad are imported. American flour is chiefly used for whitening the native product. Most of this flour for sale at Ghent comes from St. Louis and Minneapolis. The "Patents" and "Imperial" are generally preferred. American flour is the most employed after the native product. The wheat flour coming from Hungary is used largely, but only for pastry and the finer baking. Bakers agree that American flour is better for working, and that the same quantity produces more bread; for instance, 100 kilograms of American flour is said to produce 4 more pounds of bread than the same quantity of any other flour. Double zero (00) native produces 125 to 133 kilograms of bread to 100 kilograms of flour.

IMPORTS OF FLOUR AND WHEAT.

It is impossible to answer any of the questions relative to the statistics for this district, inasmuch as no separate record is available for information. All wheat and flour coming to Belgium from the United States enters this country by way of Antwerp; consequently its tables of statistics include all Belgium. Furthermore, the last figures available are for the year 1892. The classification given to these two subjects in the "General Statement of Commerce with Foreign Countries," from which the annexed tables are composed, is: "Wheat, spelt, and meteil" and "flours, brans, food feculæ, and meslins of all kinds." "Meteil" is a mixture of wheat and rye. There are not, to my knowledge, any more exact statistics to be obtained. The tables hereafter given indicate the quantities in kilograms of 2.205 pounds and the values in francs of 19.3 cents. The figures of imports include only the amounts which have been actually used in Belgium and those of exports only such as have been produced in this country. Wheat or flour simply in transit is not included.

Table A shows the amount of importation of grain of all kinds from abroad into Belgium. It will be noticed that the countries from which grain now chiefly comes are the United States, Roumania, and the East Indies. Russia, which five years ago furnished the largest quantity, now supplies less than one-sixth its former amount. Roumania, our chief competitor, supplies less now than five years ago, while the East Indian statistics show fluctuation. The quantity imported from the United States, it is gratifying to observe, has steadily increased. A curious item is that, while the amount supplied by the United States in 1892 was one-fourth more than in 1891, the value was much less.

Table B shows the importation of flour of every kind. Here we see that the trade of the United States has increased enormously during the past five years, until now it holds first place. At one time Holland supplied the most and later France. France is now our chief competitor. Indeed, this competition is the more likely to succeed, as the French Government itself aids and assists this trade by law and by a drawback of 1.50 francs (30 cents) for every sack of 100 kilograms exported. The fact is also apparent that though the amount of American flour imported has increased, the value has not risen in proportion.

Tables C and D show, respectively, the total importation and exportation of wheat and grain into and from Belgium. From these tables it is to be learned that, although Belgium produces a great quantity of grain, it does not suffice for the needs of the people, as the importations constantly exceed the exportations. The difference proportionally, however, is growing less yearly.

The next two tables (E and F) indicate the importation and exportation of flour of all kinds. Here it is seen that the exports show generally an excess in quantity over the imports, but, strangely, a less valuation. Considering these tables with the two preceding, it is evident that a portion of the excess of wheat imported is manufactured into flour and leaves the country under this new form.

Tables G and H are practically extracts of A and B, but show at a glance the amount and value of grain and flour imported into Belgium from the United States.

A.—*Importation of wheat, spelt, and meteil into Belgium.*

Country of origin.	Quantity.				
	1888.	1889.	1890.	1891.	1892.
	Kilograms.	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*
United States	139,670,000	216,880,000	319,569,000	448,815,000	537,204,000
Roumania	454,116,000	471,337,000	420,382,000	429,932,000	300,656,000
East Indies	71,358,000	92,467,000	105,172,000	237,633,000	114,325,000
France	31,839,000	34,736,000	43,368,000	103,568,000	83,591,000
Russia	539,996,000	358,828,000	308,637,000	281,882,000	80,905,000
Holland	67,924,000	73,449,000	60,090,000	42,780,000	56,698,000
Brazil	14,042,000	2,379,000	35,706,000	27,948,000	32,464,000
Germany	.....	27,354,000	18,635,000	30,782,000	17,209,000
England	18,059,000	6,469,000	12,685,000	13,822,000	10,431,000
Austria	9,988,000	4,648,000	2,799,000	13,350,000	5,304,000
Argentine Republic	39,585,000	19,495,000	146,584,000	148,144,000	4,709,000
Spain	74,000	82,000	656,000	107,000	1,131,000

Country of origin.	Value.				
	1888.	1889.	1890.	1891.	1892.
	Francs.	*Francs.*	*Francs.*	*Francs.*	*Francs.*
United States	24,019,000	35,876,000	56,001,000	95,902,000	88,918,000
Roumania	83,012,000	86,238,000	82,291,000	92,326,000	50,245,000
East Indies	13,555,000	17,563,000	21,009,000	52,243,000	19,361,000
France	5,592,000	6,252,000	7,843,000	19,065,000	13,492,000
Russia	77,980,000	59,980,000	54,016,000	54,752,000	12,703,000
Holland	11,977,000	13,025,000	11,215,000	8,220,000	9,307,000
Brazil	2,647,000	408,000	6,903,000	6,086,000	5,414,000
Germany	.....	5,047,000	3,522,000	6,019,000	2,899,000
England	3,268,000	1,057,000	2,435,000	2,728,000	1,761,000
Austria	1,705,000	790,000	504,000	2,737,000	871,000
Argentine Republic	7,181,000	2,914,000	26,671,000	31,820,000	22,168,000
Spain	15,000	16,000	118,000	21,000	185,000

NOTE.—Entered for consumption; grain in transit not included.

B.—*Importation of flours, brans, food feculæ, and meslins of all kinds into Belgium (entered for consumption).*

Country of origin.	Quantity.				
	1888.	1889.	1890.	1891.	1892.
	Kilograms.	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*
United States	6,933,000	8,868,000	24,946,000	20,442,000	26,620,000
France	17,685,000	32,109,000	32,989,000	43,494,000	24,117,000
Holland	21,862,000	21,915,000	21,147,000	15,533,000	13,931,000
Germany	.....	13,546,000	12,076,000	11,035,000	6,561,000
Argentine Republic	1,635,000	294,000	1,735,000	715,000	4,709,000
East Indies	23,000	136,000	699,000	527,000	3,453,000
Roumania	1,836,000	3,254,000	580,000	619,000	1,781,000
Brazil	157,000	.....	486,000	.....	384,000
Russia	7,199,000	986,000	547,000	1,088,000	355,000
Austria	.....	255,000	29,000	39,000	263,000

B.—*Importation of flours, brans, food feculæ, and meslins of all kinds, etc.*—Continued.

Country of origin.	Value.				
	1888.	1889.	1890.	1891.	1892.
	Francs.	*Francs.*	*Francs.*	*Francs.*	*Francs.*
United States	2,775,000	3,547,000	7,484,000	6,357,000	6,419,000
France	7,220,000	13,003,000	10,172,000	13,890,000	6,186,000
Holland	8,863,000	8,822,000	6,445,000	4,910,000	3,494,000
Germany	.....	5,422,000	3,624,000	3,430,000	1,594,000
Argentine Republic	654,000	117,000	521,000	222,000	1,130,000
East Indies	9,000	54,000	210,000	163,000	189,000
Roumania	734,000	1,302,000	174,000	192,000	428,000
Brazil	67,000	.....	146,000	.....	92,000
Russia	2,915,000	394,000	164,000	337,000	85,000
Austria	.....	202,000	12,000	9,000	82,000

C.—*Total importation of wheat, spelt, and meteil into Belgium (entered for consumption).*

Year.	Quantity.	Value.
	Kilograms.	*Francs.*
1888	819,870,779	155,775,448
1889	766,587,033	145,652,000
1890	896,721,596	179,344,319
1891	1,416,686,457	311,671,000
1892	1,032,058,126	175,449,882

D.—*Exportation of wheat, spelt, and meteil from Belgium (grain in transit not included).*

Year.	Quantity.	Value.
	Kilograms.	*Francs.*
1888	198,500,254	37,715,048
1889	187,198,677	35,567,749
1890	223,268,989	44,654,000
1891	458,307,513	100,828,000
1892	375,744,813	63,876,618

E.—*Total importation of flour, bran, food feculæ, and meslin into Belgium (transit trade not included).*

Year.	Quantity.	Value.
	Kilograms.	*Francs.*
1888	75,126,938	30,050,773
1889	80,881,577	32,353,000
1890	94,997,858	28,499,357
1891	100,734,000	31,228,000
1892	85,409,831	20,498,359

F.—*Exportation of flour, bran, food feculæ, and meslin from Belgium (transit trade not included).*

Year.	Quantity.	Value.
	Kilograms.	*Francs.*
1888	96,123,243	22,108,346
1889	87,928,081	20,223,459
1890	93,680,744	18,736,000
1891	110,526,169	22,105,000
1892	93,696,273	20,613,180

G.—*Importation of flour, bran, food feculæ, and meslin into Belgium (entered for consumption) from the United States.*

Year.	Quantity.	Value.
	Kilograms.	*Francs.*
1888	6,933,000	2,775,000
1889	8,868,000	3,547,000
1890	24,946,000	7,484,000
1891	20,442,000	6,359,000
1892	26,620,000	6,419,000

H.—*Importation of wheat, spelt, and meteil into Belgium (entered for consumption) from the United States.*

Year.	Quantity.	Value.
	Kilograms.	*Francs.*
1888	139,670,000	24,019,000
1889	216,880,000	35,876,000
1890	319,569,000	56,001,000
1891	448,815,000	95,902,000
1892	537,204,000	88,918,000

OBSTACLES TO TRADE.

Every merchant whom I have addressed tells me that there is not any certainty of twice receiving the same quality of flour even under the same brand. The second lot purchased on the same conditions is always inferior to the first. Naturally, suspicions arise concerning the honesty of the American shippers. There has been given me, however, one explanation. It is said to be the custom of certain Belgian houses to purchase the old sacks, to fill them with inferior flour (sometimes native, sometimes foreign), and to place this article on the market under its original mark. Here is the first great obstacle. To secure immunity from all possible false pretenses, American merchants should send flour in such parcels or packages that the contents can not possibly be changed or the wrappers used a second time, thereby guarantying to the purchaser the inviolability of their brand.

The large indigenous production is naturally another competing influence. More than this is the proximity of French markets. Americans are not

ready to give the credit usually desired. The merchants must pay in thirty days, while they receive their pay from the bakers only in sixty, ninety, or one hundred and twenty days. Again, bakers in this city pay for their flour largely in copper coin. The banks do not receive this coin, consequently there is not any method possible by which the merchants can remit to the United States. These terms—long time and partial payment in coppers—are conceded by Belgian millers, who consequently have a great advantage. American flour is also, according to the prevailing idea, too dry. In fact, it is seldom used alone, but only as a mixture with the native product. American merchants want to sell quantities at a time too large for this market. The bakers, generally speaking, with the exception of the coöperative societies, have not the means of storing it. To secure a trade the seller must be ready to sell in small quantities without the mediation of agents and to deliver the purchases regularly. Again, the price of American flour is generally higher than others. While a difference of opinion exists, it seems that to the Belgian idea its possible superiority does not compensate for the extra price. From the tables it is evident that much foreign flour is introduced into Belgium. The American article has a fair chance, but to successfully compete the price must be reduced. Whether the cost of transportation renders a further reduction in its price possible is a question which American millers must decide.

PRICES.

The prices of wheat flour have been as follows per 100 kilograms:

Quality.	February, 1892.	February, 1893.	February, 1894.
	Francs.	*Francs.*	*Francs.*
00.00	31.00 to 33.00	23.00 to 25.00	19.50 to 21.00
00	30.00	22.00	18.25 to 18.50
0	29.00	21.00	17.00 to 17.25
1	27.00	19.00	15.00
3			13.00

The above prices are to bakers. At the mills the merchants pay one franc per 100 kilograms less. Retail prices to-day are as follows per 100 kilograms:

Quality.	Price.	Quality.	Price.
	Francs.		*Francs.*
00.00	20.00 to 20.50	1	16.50
00	18.50	3	14.50
0	17.50		

The price of bread has likewise fallen. In 1891 the coöperative societies sold for 28 centimes per kilogram bread which they now sell for 20 centimes. The prices at the bakers are, respectively, 36 and 30 centimes.

AMERICAN AND BELGIAN WHEAT.

This branch of the subject is not so broad as the other portion of this report. In this district there are, I am informed, five large mills. Two very large establishments are situated at Deynze, not far from Ghent. The proprietors are Mr. Timmermans and Mr. De Volder. The three chief mills in this city are owned by Messrs. Bracq & Co., Epouse Blancquart, and Mr. Charles Aerts. All these mills are provided with the most recent machinery. The total combined capacity of the five is about 300,000 kilograms of wheat per day, valued at 42,000 francs. The wheat imported from the United States is mostly that known as Red Winter No. 2, recently selling in Antwerp at 14.38 francs per 100 kilograms. Other brands used are Kansas No. 2, Newport News, Walla, and California.

The Belgian harvest last year was very fair, and consequently the price of wheat has fallen. The finest quality of Belgian wheat comes from the district of Audenaerde and the province of Brabant. The total product of the harvest of wheat and rye in 1893 may be estimated at 13,500,000 hectoliters. The principal grain crops are wheat, rye, barley, and oats. The provinces of East and West Flanders are especially fertile, although among the most densely populated districts of the world.

SHIPPING AND EXCHANGE FACILITIES.

There is not any direct line of steamers or boats from any port of the United States, although vessels drawing 18½ feet of water can come through the Terneuzen Canal and discharge immediately in Ghent. Such a line from New York or Boston could be established on a paying basis, as there would never be lack of return cargo. The rag shippers would especially welcome such an enterprise. Wheat comes now from Antwerp to Ghent by water. Its transfer and carriage cost about 2 francs per ton. Flour, however is transported by railway, and the cost from steamer in Antwerp to warehouse in this city is much more, being not less than 5.50 francs per ton. If these extra costs were removed by direct communication by a regular line between our ports and Ghent, the price of wheat and flour could without doubt be sufficiently reduced to obtain a large trade for both these staples, not only in this district, but also in all the surrounding country, of which this city is the natural and nearest port.

As heretofore mentioned, the refusal of copper by the banks constitutes a great obstacle to the easy exchange of money. Aside from this fact, the facilities for exchange are equal to those in other parts of Europe. All drafts are via London. The chief banks here are the National Bank (branch), having other branches in all the principal towns of Belgium; the Bank of Flanders, the Bank of Ghent, and the People's Bank. There are numerous private bankers.

ACKNOWLEDGMENTS.

My authorities for the statements made in this report are Messrs. A. Brasseur-De Crom, Max Lubliner, and Jules Van den Abeele, grain and flour

merchants of Ghent; Mr. Edward Parein, of Antwerp; Mr. E. Bracq, miller; Mr. E. Anseele, director of the Vooruit; Mr. De Smet de Naeyer, director of the Volksbelang; and Mr. J. Oxley. To all these gentlemen I wish to take this method of returning my thanks. The tabulated statistics showing the imports and exports of flour and grain are prepared from the "General Statement of Commerce with Foreign Countries" for 1892, published by the Minister of Finance.

HENRY C. MORRIS,
Consul.

GHENT, *March 8, 1894.*

LIEGE.

STANDARD OF LIVING.

The standard of living in Liege is as high as that in any other manufacturing city in which I have been. There are no very rich men here and few indications of extreme luxury, but the masses appear to be prosperous.

The regulation breakfast of a Belgian artisan consists of bread, butter, and coffee. At ten o'clock a similar repast is taken, and at noon he dines upon bread, vegetables, and pork. At 4 he again refreshes himself with bread and beer, and in the evening takes potluck with his family. When times are hard bread becomes the sole staff of life. Thus the effect of adversity is to increase the consumption of bread.

QUALITY OF FLOUR USED.

Dealers in grain and millers—the avocations are usually joined here—agree that American wheat is the best known to the trade, though they foster a local prejudice in favor of that which is home grown to enable them to mix their grain and sell flour at a larger profit. The pretense is made that, although bread from our flour is whiter and more appetizing, it lacks body and gluten.

IMPORTS OF WHEAT AND FLOUR.

The province produces about two-sevenths of the grain it consumes; three-sevenths come from the Danube, and the residue, or two-sevenths, from the United States.

The American wheat sells usually for 10 cents more per bushel than the Turkish or Russian, and the latter for as much more than the Belgian.

The bakers report four grades of bread in use—the superfine, the fine, the gray or mixed, and the black. The first is made from American wheat, with a little Belgian added, the second from Russian and native mixed, the third from the Belgian mixed with rye, and the fourth from rye alone. When work is abundant at least two-thirds of the bread consumed is white, but when labor is depressed only about one-half of it is pure. Of the black

very little is eaten, except in times of great hardship. It is, however, fed in large quantities to horses and dogs. The cabmen all carry loaves, and when at rest are often seen slicing and feeding them to their horses.

The prices of bread are 3, 2½, 2, and 1¾ cents per pound for first, second, third, and fourth qualities, respectively.

Millers, merchants, and the public admit that American wheat is the best produced, and that but for the higher price at which it is sold it would possess the market. As it is, although no effort has been made to increase its sale, the demand for it has grown in the last five years at the rate of 10 per cent per annum. The province is so well supplied with mills that foreign grain finds a readier sale than foreign flour.

TRADE OUTLOOK.

In conclusion, I see no reason why the United States should not extend their cereal trade in Belgium. With a boundless domain of the best wheat-producing soil in the world, with a yield of grain unprecedented in both quantity and quality, and with unlimited capital for its manipulation and movement, they might easily control the markets of the world. Surely, with all our advantages, we should be able to deliver wheat in Antwerp as cheaply as either Russia or Turkey.

Why should not syndicates be formed and special agents appointed in all European cities—especially where grain is admitted free—of over 100,000 inhabitants?

NICHOLAS SMITH,
Consul.

LIEGE, *February 22, 1894.*

FRANCE.

AMERICAN GRAIN AND FLOUR TRADE.

There has been for some years past an increasing demand in France for American wheat, which, when mixed with the softer French wheat, produces an excellent flour, and for this purpose such importations have become very considerable. The opinion generally prevails that when the French and American wheats are mixed and ground the flour is the most perfect that can be furnished; and it is further asserted by those whose interest lies in the flour industry that the American flour can not at present compete with either the local product or the Hungarian flour sent to this market.

Whether the preference for the inland and Hungarian flour over the American product is entirely justified, it is difficult to say; but it is quite possible that it arises from an apprehended danger of competition, and from the fact that inferior grades of American flour have from time to time been foisted upon the European market. It is a mistake to suppose that inferior flour can be put upon this market with success. Let the best grades be offered on the most favorable terms, and it will soon be seen whether competition be possible. In the production of all food supplies the United States are acknowledged to be the "growing giant that threatens to crush all competition," and an apprehension of this fact has caused the millers of France, Switzerland, and Hungary to make extraordinary efforts to improve the quality of their flour. With this object they are not slow to make improvements in their mills in order to turn out the highest and best grades of flour; but it is not probable that the American miller will be deterred by any mechanical difficulty from entering the European markets. As already stated, Switzerland and Hungary are the only countries foreign to France that occupy this market, and there is certainly a wide field here for the introduction of American flour if the people can be made to see that it is of uniformly good quality and somewhat cheaper in price.

IMPEDIMENTS TO IMPORTATION.

It can be stated with satisfaction that the transport houses and shipping agents here lose no time in duly executing American orders and in adopting, as far as possible, measures calculated to expedite business; but it is obvious that not only the quality, but the price, of the American product must be adjusted to compete with European products. It must have something more than the mere name of "American" to commend it. A higher grade and lower price than foreign brands is the great desideratum; but against this stands the ocean freight rates, etc. The French tariff on flour is the same for all countries, viz, $1.54 per 100 kilograms (220 pounds); but as

this is met by other countries exporting flour to France, notably Hungary and Switzerland, it would seem that the American exporters, notwithstanding the disadvantage of somewhat higher freight rates, may yet be able to compete for this trade, since the American power of production grows in a far greater proportion than that of European countries, which have about reached their climax and will now rather go backward than forward in proportion to their increasing population.

ENLARGING THE TRADE IN AMERICAN FLOUR.

I believe the most practical means for this purpose would be for the exporter to communicate with firms who are perfectly familiar with the demands of the French market, and who are at the same time experts competent to point out faults and suggest remedies. Perhaps the formation of a syndicate with a large capital to set up a house in Havre, under the management of a competent agent, might prove a successful venture. Under no circumstances should the consignments be made to houses selling flour from other countries, or even the local output. It has been observed that this practice has done much to bring American goods into disrepute in this country; for in nine cases out of ten such a consignee will make no effort to sell the American article, and his recommendation of it is always feeble. The agent should be an experienced person, of good address, familiar with foreign life and customs, and who speaks the French language fluently. He could either take orders for consignments beforehand, and then have the flour forwarded for delivery, or he could keep a supply always on hand. It is believed that such a scheme would be successful and finally result in opening up a large market for American flour. All circulars and catalogues should be printed in the French language.

STANDARD OF LIVING.

In this part of France (Normandy) many hundred years of commercial success and intellectual work have developed a people of superior mental activity and a delicacy of taste which seems to have become innate. Under such circumstances the standard of living in this consular district may be rated as quite equal to that of any other country or district in Europe. But, considering the fact that France ranks second to the United States as a wheat-growing country (the average annual harvest being about 325,000,000 bushels), and that since the advent of the phylloxera and other maladies of the vine she is giving more and more attention to the production of her own food supply, it would not be safe to say unreservedly that the people as a nation are quite "ready to eat American flour," unless it can be made obviously to their interest to do so.

At the present time there is believed to be some demand for American flour, growing out of the failure of the wheat harvest in 1892 and the protracted drought that extended over western and central Europe in 1893.

It is to be noted further that the disproportion between the grain producing and consuming capacity of France is considerable and yearly increasing,

and the deficiency in the crops of the last two years—1892 and 1893—must be made good from some other quarter of the globe, In the discussion of this important portion of the French food supply, the whole grain crops of the country and the entire imports of all kinds of cereals—*i. e.*, grain and flour—would require to be taken into consideration, and this large question can not be here entered upon.

Annual yield of wheat in France for the decade ending December 31, 1893.

Year.	Quantity.	Year.	Quantity.
	*Hectoliters.**		*Hectoliters.**
1884	103,753,426	1889	98,740,728
1885	114,230,977	1890	108,319,774
1886	109,861,862	1891	116,915,880
1887	107,238,082	1892	81,889,070
1888	112,456,107	1893	90,000,000

*1 hectoliter=2.838 bushels.

The best wheat flour (family and patent) is preferred by all classes in Havre and is the only kind of American flour used by the bakers, who prepare all the bread consumed by the population. This grade, though not considered quite equal to the best grades of Hungarian flour, is also used for pastry and other purposes indispensable to the baker and cook. The practice of shipping indifferent qualities of flour to this market can not be too strongly condemned. All flour sent here should be of uniformly good quality and just what it is represented to be. It should be free from all grit and lumps, from all smell of damp or moldiness, and it should have no acidity of taste. All flour is subjected to crucial tests, and if it falls short in the essential qualities of a good flour it is instantly rejected. The baker roughly measures the quality of flour by observing the tenacity, etc., of the dough when drawn out; but a more accurate means of determining the quality has been provided in the aleurometer, an invention of M. Boland, a Parisian baker, which is now generally in use.

The following analytical statement indicates the composition of flour which is regarded here as a good, sound article and readily salable:

Components.	In 100 parts.	In one pound.	
		Ounces.	*Grains.*
Water	13	2	35
Fibrin, etc.	10.5	1	297
Starch, etc.	74.3	11	388
Fat	0.8	0	57
Cellulose	0.7	0	44
Mineral matter	0.7	0	49

IMPORTS OF WHEAT AND FLOUR.

The importation of cereals (grain and flour) into France from all quarters in 1891 amounted to 588,446,900 kilograms.*

*1 kilogram=2.205 pounds.

The following table of imports at Havre will in small compass present a general answer to questions 3, 4, 5, 6, 7, and 8:

Country.	Wheat.	Wheat flour.
1891.		
United States:	*Kilograms.*	*Kilograms.*
Atlantic coast	261,089,700	22,682,700
Pacific coast	183,740,200	.....
Total from United States	444,829,900	22,682,700
From other countries	112,056,700	2,151,400
1892.		
United States:		
Atlantic coast	130,603,000	960,100
Pacific coast	138,808,800	.....
Total from United States	269,451,800	960,100
From other countries	55,837,800	517,200
1893.		
United States:		
Atlantic coast	71,445,700	112,700
Pacific coast	69,933,400	.....
Total from United States	141,379,100	112,700
From other countries	87,614,700	537,300

MONETARY EXCHANGE.

Banking facilities in Havre are all that could be desired, and banking establishments charged with floating loans have done so with so much success that they have been enabled to pay their shareholders increased dividends. The American gold dollar is worth at this time in exchange 5.18 francs* and the English sovereign, or pound, sells for 25.19 francs.

FACILITIES FOR SHIPPING.

The facilities for shipping goods from the United States to Havre are abundant and regular. Three lines ply regularly—(1) the Compagnie Général Transatlantique, weekly to New York; (2) the Compagnie Commerciale, monthly to New Orleans; (3) the Chargeurs Réunis, to New York and New Orleans regularly, and to other American ports as occasion may require. Besides the above regular lines of steamers plying between Havre and the United States, other steamships bring freight directly to this port from New York, Philadelphia, Baltimore, Norfolk, Charleston, Savannah, Apalachicola, Pensacola, Mobile, New Orleans, Galveston, San Francisco, etc. Occasionally large sailing vessels arrive loaded with cereals from the Pacific coast. The steamship companies of England, Holland, Belgium, Germany, and the American line also land goods for Havre at their respective European ports, which are reshipped by coastwise steamers or by rail for this port. A daily line of channel steamers connecting with the American line, the North German Lloyds, and the Hamburg-American Packet Company run between this port and Southampton.

* 5 centimes=1 sou, or a small fraction less than one American cent; 100 centimes=1 franc; 1 franc=19.3 cents.

TARIFF CHARGES.

The following table shows the French duty on American wheat and flour per 100 kilograms:

Description.	Duty.	
	Francs.	
Wheat grain	5	$0.96½
Ground wheat:		
Yielding 70 per cent or more of flour equal to American "Superfine"	8	1.54½
Yielding 60 to 70 per cent of flour equal to American "Extra"	10	1.93
Yielding 60 per cent or less of flour equal to American "Family" or "Patent"	12	2.32½

Samples of flour corresponding to the bolting must be deposited in the custom-house offices as types for the verification of said flour.

OBSTACLES TO TRADE.

The great barrier to an extended use of American flour in this market is the customs duty, but I am informed that objections have also been made to the quality of the flour hitherto imported. If this fault is remedied and flour sent here of the same quality as that imported from Hungary, there would seem to be no doubt that our millers could compete in this market, notwithstanding the import duty.

C. W. CHANCELLOR,
Consul.

HAVRE, *January 18, 1894.*

ADDENDUM.

In France flour is delivered to the bakers only in large sacks, barreled flour being sold almost exclusively for use on board ships and for export purposes. The foreign flour barrel is smaller and more substantial than that used in the United States. There seems to be a very general belief here that flour packed in bags is better in quality and keeps better than the barreled flour. Whether this opinion is correct or not, the French people are firmly convinced that such is the fact, and it is quite useless to attempt to argue them out of the belief or to prepare flour for shipment to this market except in conformity with the usage of the country and wishes of the consumers. It follows, therefore, that flour intended for export to France should be contained in bags and so packed as to exclude dust and moisture.

As already stated, the quality of the flour intended for sale in France is of the first importance, since indifferent flour finds no favor with the bakers, who, after all, are the arbiters of the flour market, homemade bread being practically unknown in France. The smallest village or settlement has a baker who supplies not only the immediate inhabitants, but all families in the neighborhood, with bread, which must be of a standard quality, and this can only be attained or made from flour that compares favorably with the

"douze marques," or standards by which flour is bought and sold in France. The bakers at Havre are quite suspicious of American flour, for the reason that several lots of indifferent flour imported from the United States have been put upon this market, to the detriment of their trade. Flour, however, ground at Paris from American wheat, and equal in quality to one of the "12 marks" is used to a considerable extent to mix with the French flour.

The gluten or fibrin, which contributes so largely to the nutritive quality of French and Hungarian flour, is said to be often deficient in American flour. In the manufacture of the former the gluten is carefully preserved for the benefit of the bread-consumer, whereas it is stated that this nutritious element is extracted by the American millers, in order to impart a whiter appearance to the bread, but at the expense of both its strength and flavor. The grayish or brownish tinge and superior flavor of the Italian macaroni and Italian bread, as compared with similar products made from American, or even French, flour, is said to be largely due to the excess of gluten contained in the Italian flour, the Italian wheat surpassing all other in the quantity of gluten which it contains.

As the price of flour in France is regulated absolutely by the prevailing price of wheat, the result of the debate now in progress in the French Chamber of Deputies on the proposed increase of duty on wheat may exercise an influence of no little moment on the market for American flour in this country.

But it must not be taken for granted that this new customs barricade against the introduction of foreign wheat into France will, if erected, necessarily augment the price of either wheat or flour. Indeed, the experience of the past would seem to controvert such a theory. It has been clearly shown by statistics that the market price of wheat in France has steadily declined, instead of increased, since the duty on cereals was first imposed, and at this time wheat is actually 3 francs (60 cents) less per 100 kilograms (221 pounds) than it was in 1884, before the duty was established.

If such a thing were possible, a firmly established commercial treaty between the United States and France, involving solid and durable advantages to each of the contracting parties, would go far toward breaking down the fiscal barriers which hamper the commercial intercourse between these two great countries, and would at once open an extensive and liberal market for most of the food products of the United States.

C. W. CHANCELLOR,
Consul.

HAVRE, *February 12, 1894.*

NANTES.

STANDARD OF LIVING.

The staff of life in the consular district of Nantes, which embraces the entire northwestern coast of France—*i. e.*, Loire-Inférieure, Morbihan, and Finisterre—is wheat and its products. The quantity of bread consumed is simply enormous and is continually on the increase.

The quality of flour most used is "bolted flour"—*farine blutée à* 30 per cent. The first and second quality of "groats" are also in very great favor. And here I desire to mention especially the "small white wheat" of Michigan, which is highly prized by the French people, although they get very little of it.

IMPORTS OF WHEAT AND FLOUR.

The quantity of American wheat imported into this consular district during the years 1891, 1892, and 1893 was extremely small, almost insignificant. This, I think, has been the fault of American shippers and merchants, and not the lack of desire on the part of French people to consume American wheat and its products, which, as I have already said, they esteem highly.

The quantity of American wheat flour imported into this consular district in the years 1891, 1892, and 1893 was nil.

The quantity of American wheat imported in 1893 was as follows, none being imported in 1891 and 1892: General shipments, 19,805 kilograms; special shipments, 20,590 kilograms; total imports, 40,395 kilograms.

The quantity of wheat imported from other countries into this consular district during the foregoing years was mostly from the Black Sea region and was as follows:

Year.	General.	Special.	Total.
	Kilograms.	*Kilograms.*	*Kilograms.*
1891	9,187	39,316	48,503
1892	12,074	11,234	23,308
1893	107,550	103,892	211,442

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are perfect, and are exactly the same as those of Paris.

As to shipping facilities from the United States to this port and its consular dependencies, nothing more could be asked than is supplied both by nature and the engineering skill of man. The ports of Nantes (with its magnificent canal), St. Nazaire, Brest, L'Orient, etc., offer every possible facility for discharging cargoes of wheat or any other merchandise. But I

would especially call the attention of American shippers to the ports of Nantes and St. Nazaire. Vessels of 3,000 tons and over can now discharge their cargoes directly upon the quays of Nantes, the principal city of this region. I would also call attention to the city of Angers, which is an island consular agency and a great flour and wheat market. This city could be easily reached by St. Nazaire.

TRADE OUTLOOK.

In my opinion, there is no reason why American flour should not be more extensively used than at present in this consular district. As I have already said, it is highly appreciated on account of its nutritive qualities, much more highly, indeed, than the French wheat or wheat from other countries. But, in supplying the districts of the Loire-Inférieure, Morbihan, and Finisterre, it is a mistake to ship the grain to Havre, as has been done heretofore. American wheat can never be introduced into this section of France in that way. The freight charges from Havre to the various destinations are too great. The grain should be shipped directly to Nantes or St. Nazaire, which cities are the distributing points of this consular district.

As to the obstacles in the way of introducing American wheat and wheat flour, there are at present none, except the tax of 5 francs per 100 kilograms imposed upon importations from any and every country. But there is a prospective obstacle in the threat to levy a prohibitive tax on all foreign wheat and its products. The Agricultural Society of France, seconded by one of the deputies of the north, has asked and urged the French Government to impose an additional tax of 5 francs (96.5 cents) on each 100 kilograms of foreign wheat and its products that may hereafter be brought into France. The French farmers are alarmed at the increasing influx of foreign grain and propose to stop it. Whether or not they will succeed in imposing an importation tax of 10 francs on every 100 kilograms of wheat and its products imported into the country is doubtful; but the pressure to this end is very great, and the cause of the farmers is very ably presented to the Government at Paris by their delegates. It is my opinion that they will succeed, and that the additional tax will be imposed.

REAVEL SAVAGE,
Consul.

NANTES, *January 26, 1894.*

NICE.

THE RIVIERA.

The Riviera is a name given to the southern coast of France extending from St. Raphael on the west to San Remo on the east. It is a district devoted to sanitation and pleasure, and is known as the winter resort of Europeans and Americans who seek to avoid the rigors of severe climates or

who seek rest and recreation. Its trade depends largely upon the Americans who seek the pleasures of this sunny land and who spend large sums of money for personal expenses from December till May.

The city of Nice, which is the chief center of attraction, combines the advantages of mountain air and sea breezes, being situated within a semicircular space of territory bounded by the Maritime Alpes and the Mediterranean Sea. It is well built, with handsome houses and villas and numbers of hotels of a most excellent character. Its pleasures are varied and offer many attractions to the invalid. Hence there are added to its resident population of about 90,000 citizens perhaps as many as 20,000 travelers during the time above mentioned, and during the carnival there are many additional thousands who come here for two or three weeks. Cannes, Monte Carlo, and Mentone are other places within the district which have their attractions for those who seek the Riviera during the same season. Upon the influx and efflux of these strangers depend the conditions of active or stagnant business. Though all these places are seaports, they have no other commerce than that which depends upon the conditions above stated, except in a small degree. Cannes exports perfumery, and there is a very small export of olives and olive oil from Nice. In consequence of these facts, the coast trade of the Riviera is carried on by steamers which run at intervals from Marseilles and Genoa and coasting sailing vessels.

Marseilles and Genoa, being important cities of foreign commerce, the Riviera, which lies between them, is generally supplied in all its foreign wants by coasting vessels or by railway from these two cities. The country is in a high state of cultivation, and its internal wants are supplied by the industry of its people. No ground is idle, except the gardens of the rich, and even these produce abundant fruits. Hence the people of the country produce all that is necessary for their own living and contribute largely by their surplus to the demands of the neighboring towns and villages. Those who live in the country districts raise wheat and other grains, and their bread is homemade from their own production.

STANDARD OF LIVING.

The standard of living in the towns of the Riviera is high—perhaps exceptionally so—as compared with other countries, for, since the standard is raised by the great influx during the winter, money is easily earned and wages are generally high, making the conditions of living costly and, as a rule, much more expensive during the whole year than in the United States. Limited incomes find a speedy end, and only economy can meet the demands which exist because of unusual conditions. The taste of the people leads them in the cities to have excellent articles of food; and as a rule their means of living being greatly enlarged by their intercourse with their foreign visitors, they seek always the best qualities of food supplies. This is specially noticeable in the bread found in the cities, for, as the peasants furnish their own bread supplies, it is only in the cities that foreign flour can

find a market. And here the law of supply and demand governs trade, as everywhere. The people and their guests demand the best bread and at the cheapest prices obtainable. Dealers therefore naturally ask, what is the quality and what are the prices. They will buy the best at the cheapest prices, and do not concern themselves as to whence an article comes. Flour is sold here by brokers, who furnish samples and prices, and who take orders, generally bringing their supplies from Marseilles, Genoa, or at times Havre. These brokers supply hotels and bakers, who in their turn supply all the people. The housewife here does not buy flour, but bread. The flour used in private families, therefore, is very limited as compared with the bread consumed. Dealers, therefore, would naturally desire American flour if the quality and price could advantageously compete with the supplies derived from other sources. Hence the importance—a fact which can not be too strongly emphasized for the benefit of American millers and exporters—of being systematically represented here by experienced agents who could offer advantages on the markets.

AMERICAN FLOUR.

American flour is said to have been brought here in small quantities from Havre and to have been sold at better terms than other kinds, even against great disadvantages of freight, etc., but this is reported to have been of the finest quality. One great need is perfect whiteness, a quality greatly prized by bakers, hotels, and restaurants. The retail price of bread here is just about what is usually paid for the same qualities and weights in the large cities of the United States, but the essential quality of whiteness must always be remembered.

In obtaining statistics upon which to base figures, the consul is compelled to employ persons who have both expert knowledge and access to clerical officers through personal acquaintance and friendship, for, while a courteous offer would doubtless at all times be made to a consul to examine the various books, still it would be absolutely impossible to avail himself of such an offer in great offices where such masses of papers must be searched, even if he could leave his office for such purposes. I have employed a business man of large experience at my personal expense to obtain the data herein given, and his labor has been supplemented by personal influence and friendship of different clerks in the custom-house, board of trade, and commercial houses.

There was no importation of American wheat flour in this district, from searches thus made, during the years 1891–'93.

AMERICAN WHEAT.

American wheat importations were as follows:

	Tons.
1891	None.
1892	250
1893	997

IMPORTS OF FOREIGN FLOUR AND WHEAT.

Importations of wheat and wheat flour from other countries were as follows:

Year.	Wheat.	Wheat flour.
	Tons.	*Tons.*
1891	11,888	844
1892	11,694	938
1893	8,042	687

MONETARY AND SHIPPING FACILITIES.

Banks, public and private, are always ready to offer every facility within their sphere and power, and the rates of exchange are those usual with all such institutions; such facilities are always obtainable.

The chief obstacle to extending the trade is the want of direct communication, either by steamers or sailing vessels, between the United States and the ports of Nice, Cannes, or Mentone. These ports are accessible to vessels of good tonnage, but, as before mentioned, they rely upon coasting vessels from Marseilles and Genoa and rail communication with those cities and Havre. For this reason it becomes necessary to transship at these cities, which greatly adds to the cost. The cheapest way of sending wheat or flour from the United States to this district would be by charter of sailing vessels or by sending flour or wheat by some of the "tramp" steamers to complete their cargo.

TRADE OUTLOOK.

In cases of shipment of flour, I learn that the buyers here prefer it in bags of 50 and 100 kilograms each. As to obstacles in the way of extending the trade in American flour in my district, there are none whatever except those natural conditions dependent upon agricultural production here and the ability of American exporters to compete in price after paying transportation and duties. If our business men were represented on the various exchanges, either as a body or by their personal agents, so that they could quickly inform themselves of the varying conditions dependent upon demand and supply, I should feel much hope that their quick and ready enterprise would find room here for the development of their interests.

Considering the ability of our millers to produce the finest grades of flour, there is no reason why the market for American flour should not be extended. American high grades of flour at equal prices with those of other countries should meet with ready acceptance, but I should recommend that samples be put in the hands of brokers before making large consignments, at least until a steady demand had been secured.

WILBURN B. HALL,
Consul.

NICE, *January 19, 1894.*

RHEIMS.

USE OF WHEAT FLOUR IN FRANCE.

France, with a population of 37,000,000, is one of the largest, if not the largest, consumer of wheat flour in the world. The retail price of bread is uniform, being regulated each week by the association of bakers, who, through their president, notify officially the mayor of the city of the price adopted by them, so that the latter may, if necessary, enforce the price by closing the shop of the baker who should persist in a noncompliance with the official quotation. The baker is, moreover, obliged to furnish the exact weight of bread demanded, no approximation in this respect being allowed, except in the sale of fancy bread (*pain de luxe*), which is sold by the loaf weighing more or less (generally less) than the declared weight. But it is not only the quantity that the Frenchman wants, he also insists on the quality, be he a nobleman, bourgeois, laborer, or peasant. His bread must be pure white, with long crumbs (*longue mie**) and must not dry up too rapidly. Any flour which does not come up to these requirements will not find a market in France. Of all the privations endured during the memorable siege of Paris in 1870, the absence of white bread was the most keenly felt, and the recollection of this hardship is to this day the most vivid in the memory of the sufferers, who never fail to allude to the abominable quality of bread they had then to use, pointing to this sacrifice as an evidence of their patriotism. French people are, as a result of their education, experts in flour, and, if they can be pursuaded to buy foreign flour, none but the best will suit them.

The daily consumption of wheat flour in France is estimated at 545 grams (1 pound 3 ounces) per head, equivalent to 838 grams (1 pound 14 ounces) of wheat and to 735 grams (1 pound 10 ounces) of bread; the laboring class using as much as 704 grams (1 pound 9 ounces) of flour, equivalent to 1,080 grams (2 pounds 6 ounces) of wheat and to one kilogram (2 pounds 3 ounces) of bread. The daily ration furnished to the soldier is 750 grams (1 pound 11 ounces) of flour.

WHEAT PRODUCTION IN FRANCE.

The 7,000,000 hectares (17,290,000 acres) devoted to the cultivation of wheat in France produce on an average 108,000,000 hectoliters (306,471,600 bushels) per annum, and the consumption, including an amount used for seed is 120,000,000 hectoliters (340,524,000 bushels), that is, 12,000,000 hectoliters (34,052,400 bushels) less than enough to supply the demand. This average has not even been reached during the last three years, the crop not having yielded for that period more than 100,000,000 hectoliters (283,770,000 bushels) yearly. But this deficit is not the least trouble with

*The French word "mie" is the name of the soft part of the bread as contradistinguished from the crust

which the French people are confronted; wheat-raising has been carried on at a great loss to the farmers. The cost of growing this staple has for some time past greatly exceeded its market value. It is estimated that the cost of raising wheat, including the rent of the ground, taxes, labor, manure, seed, etc., amounts to a minimum of 300 francs ($57.90) per hectare, equivalent to $23.44 per acre. As the average yield* is only 15 hectoliters (32½ bushels) per hectare, equivalent to 13.15 bushels per acre, the total cost to the farmer is 20 francs ($3.86) per hectoliter, equivalent to $1.36 per bushel. As the market price for this grain is actually 21 francs ($4.05) per hectoliter, and as it has been in the last few years as low as 15 francs ($2.89½) per hectoliter, or $1.02 per bushel, it follows that not only the farmer has made no profit, but that he has really lost money in the venture; and it must be remembered that these low prices have prevailed notwithstanding the scarcity of wheat in France, as a consequence of the large importation of foreign wheat with which the market has been glutted.

But, whatever may be the cause of the depression of the market and whatever may be the efforts to increase the production of wheat by the means of a larger outlay of money—say 400 francs ($77.20) instead of 300 francs ($57.90) per hectare, or $31.25 instead of $23.44 per acre, to raise the yield per hectare from 15 to 31 hectoliters (from 32½ to 87¾ bushels) and reduce its cost per hectoliter to 13 francs ($2.50)—nevertheless, it remains improbable that this result can be secured by the great majority of the small French wheat-growers, who, confronted by their loss of previous years, would naturally hesitate to try such a costly experiment, apt to produce fruitful results only when capital is used on large areas. The probability is that France will be compelled to import yearly an average of 10,000,000 hectoliters (28,377,000 bushels).

FRENCH IMPORTS OF AMERICAN WHEAT.

In the competition between the United States and other countries for supplying France with wheat the former has far outstripped her rivals, as appears from the following figures showing the quantity of wheat imported from the United States and other countries during the years 1890–'93:

From—	Year ending June—					
	1891.		1892.		1893.	
	Hectoliters.	*Bushels.*	*Hectoliters.*	*Bushels.*	*Hectoliters.*	*Bushels.*
United States	9,853,237	27,960,530	13,154,000	37,327,105	6,060,748	17,198,584
Other countries	433,276	1,229,507	692,588	1,965,356	354,868	1,070,008
Total	10,286,513	29,190,037	13,846,588	39,292,461	6,415,616	18,268,592

*The average yield per hectare is: In England, 28 hectoliters (79¾ bushels); in Belgium and Holland, 27 hectoliters (77¼ bushels). The yield in France is lower than in Norway, Denmark, and Finland, and larger than in Roumania, Portugal, and Hungary.

The secret of our success lies in the fact, as I am informed by the prominent mill men of my district, that our wheat is not only of better quality, but is cleaner than the others. The wheat from other countries has to be subjected before it can be ground to a very expensive process of washing, requiring a special installation which most millers can not afford; and for this reason alone, independent of all others, our wheat would be given the preference even at an advanced cost of 30 cents per 100 kilograms (220 pounds).

We have therefore, under existing circumstances, a marked advantage over our competitors, an advantage which we can retain unless a discrimination should be made against us in the contemplated increase by the French Legislature of the actual tariff on foreign wheat (from 5 to 8 francs per 100 kilograms—96½ cents to $1.54 per 220 pounds). It appears probable that, to satisfy the demands of the farming element clamoring for the protection of agriculture, Parliament will grant the increase, which, in the opinion of several important millers of my district, would result in great loss to all.

STANDARD OF LIVING.

The standard of living in this district is high. In the cities meals are generally abundant and are composed of fresh meat, vegetables, cheese, fruits, and wine. The fare of the peasantry, if not as varied, is more abundant. A thick soup containing a large quantity of bread, potatoes, and vegetables constitutes their main dish. During week days they eat salt pork, but on Sundays and fête days they add fresh meat to their *menu*. Wine, also, is the beverage used at their meals.

AMERICAN FLOUR.

American flour is almost unknown to the population of this district, and the millers have no desire to encourage its introduction; in fact, they are opposed to the importation of flour, claiming that it contains such a great amount of bran that it is rendered black, makes a short crumb (*mie courte*), drying up very rapidly. They also complain that our exporters in their shipments fail to keep up a standard of quality in the same brands; but they are ready to confess that they dread the competition of American flour, realizing that its importation would cripple the business of their numerous mills, which more than supply the demand of the country. The difference, estimated at 25 per cent, between the freight on wheat and flour in favor of the latter is, they claim, more than offset by the value of the residues of wheat so much in demand for their domestic animals; and, last but not least, the conversion of grain into flour gives employment to a great many poor people, many of whom would be deprived of work should flour instead of wheat be imported. They are willing therefore to buy our wheat when the French crops are short, but they are prepared to make most strenuous efforts to prevent the importation of American flour.

KIND OF FLOUR USED.

The best quality of flour is most used in this district. The lower grades are chiefly exported to Belgium and other adjacent countries.

IMPORTATIONS OF FLOUR AND WHEAT.

The quantity of American wheat flour imported into this district from June 30, 1890, has been so small, if any at all has reached this market, that it can not be estimated.

From all the data I have been able to obtain from the eight departments forming this consular district, the population of which approximates 3,000,000, I can safely estimate at 125,000 hectoliters (353,750 bushels) the yearly importation of wheat from the United States; but the exact amount can not be given for each year, the largest importation having been made between June 30, 1891, and August 30, 1892, as the result of the short crop of that year. The great bulk of American wheat imported is the "Red Winter," with a certain amount of California wheat; but the latter grain, although of very fine appearance, produces, I am told, an inferior quality of flour, and for this reason is not as much in demand as the former.

Very little wheat flour has been imported from other countries. Occasionally some bargains can be obtained in Belgian flour; as a rule, no flour is imported.

The quantity of wheat imported from other countries has been, for the reasons above stated, very small compared with the amount furnished by the United States; in fact, judging from the best information that can be had, most all the wheat imported to this district came from America.

MONETARY AND SHIPPING FACILITIES.

The facilities for monetary exchange are very good. A number of private banks are scattered throughout this district, and the Bank of France and the Crédit Lyonnais have branch offices in all the principal cities. But, owing to the fact that all wheat has been purchased from importers and not direct from the United States, the settlements have been made with the importers, and no exchange has been bought on the United States for this purpose.

Dunkirk is the principal port through which our wheat is imported to this district, although some is received via Antwerp, Calais, Havre, and Rouen. From those ports the wheat is carried to the different parts of this district over canals, some little by rail.

OBSTACLES TO TRADE.

The obstacles in the way of the extension of trade in American flour are several, as above stated. The millers control the trade, and they have but one class of customers—the bakers. Homemade bread and pastry are very seldom seen in France, even in the rural districts. Bakers alone make bread. Housewives do not know how to make it, and have not at home the

facilities for making it. The use of flour is consequently very limited in French homes and is bought only in very small quantities, a few cents' worth at a time, for the preparation of sauces.

The millers are organized and are a unit for the prevention of the extension of trade in American flour, and they will fight it with all the means at their command; and, unless sales of our flour can be made direct to the bakers, there would seem to be but little chance of success. The millers sell their flour direct to the bakers through their traveling agents, and if our millers wish to enter into competition, the only way is for them to do likewise and be represented here by capable agents provided with samples of their best flour and prepared to meet the criticisms and objections of the local millers and overcome the prejudices which the latter are apt to create in the minds of their customers.

Another and greater obstacle is the threatened new tariff on imported flour, which many ask to be made prohibitive.

PROSPECTS.

The prospects for doing a more extensive business in American flour are not at all flattering, but we can safely look forward to an increase of business in American wheat, which will be in direct ratio with the decrease of the wheat crop in France. It has been estimated that we can lay our wheat in Havre for 14.08 francs per hectoliter of 80 kilograms (95 cents per bushel). If such is the case, is it reasonable to believe that through mere patriotism the Frenchman, who depends on bread as much as on air and light for sustaining life, will pay more for bread made with French flour than bread made with American flour and that bakers themselves will prefer trading with their countrymen than our dealers if in doing business with the latter they can secure the same quality of goods at reduced prices? American exporters must bear in mind that American flour is not known or is little known here. If they are ready to furnish a quality equal in all respects to the best grade of this country, they will, by well-directed efforts, triumph over the prejudices which the French millers have a great interest in keeping alive in the minds of their customers, in order to retain a monopoly which allows them to maintain their prices, even when wheat is selling below cost to the farmer. It would therefore seem that the sympathies of the customer would be assured to those who could and would supply him with good and cheap flour, the indispensable and most important article of food for the people of this country.

HENRY P. DU BELLET,
Consul.

RHEIMS, *January 22, 1894.*

ST. ETIENNE.

STANDARD OF LIVING.

The consumption of bread in France is perhaps greater than in any other country in Europe. That the consular district of St. Etienne is no exception to the rule, is attested by the number of bakeries within its limits. The general standard of living is about the same as in most large manufacturing towns. I find no preference expressed for American flour.

QUALITY OF FLOUR USED.

The quality used is in general the best, or first, quality, although what is known as "seconds" is in considerable demand among the laboring classes. In many of the country districts rye flour is consumed in place of wheat flour.

FLOUR IMPORTS.

No American wheat flour was imported into this district during the years 1891–'93, for the reason that within the last few years flour mills have been pretty generally established throughout France, and consequently the French have been able to grind both the domestic and the imported wheat not only in sufficient quantities for their own consumption, but for export to Switzerland and Italy.

IMPORTS OF WHEAT.

It is very difficult to form an estimate for an inland consulate, and especially for each of the six departments composing the consular district of St. Etienne. The department of the Puy de Dôme, a very fertile section, produced during the period named sufficient wheat for its own use; the Haute Loire also raises sufficient wheat for home use, but in this latter department there is a large consumption of rye flour. The Loire, on the contrary, does not produce enough wheat for home consumption, and at one time imported largely from the United States and Russia.

One of the largest mill-owners of the district tells me that prior to 1893 about 9,200 tons of American wheat were brought into the department each year, but that last year no American wheat was purchased, Russian being preferred. My informant alleges as a reason for the preference that the Russian wheat contains more gluten. It might be added that just now in France the predilection for everything that is Russian is based upon a sentiment so widely spread and so deeply seated as to become no unimportant factor in any calculation of the probable "extension of markets" in this country. It should be noted in this connection that the inland millers do not import directly in any case; they get their wheat from large depots in Havre and Marseilles, chiefly from Marseilles.

At present Russia alone exports wheat to this district. It is estimated that she furnishes about 25 per cent of the total consumption.

EXCHANGE AND SHIPPING FACILITIES.

The principal banks in this district have correspondents in New York, so that exchange is rendered very easy and simple.

As a rule, the foreign wheat is brought to this district from Marseilles, which is the chief port of entry for transshipment of grain to the interior. The distance from Marseilles to St. Etienne by rail is 232 miles. The cost of transport to this city by rail is $3.48 per ton. For flour it would be about $5.75. The water way of the Rhône is sometimes resorted to, but, although in that way the cost is somewhat reduced, the transit is much slower; and, as the Rhône does not flow through this department, the cargo would have to be unloaded at a point 25 miles from here and then carried to St. Etienne by rail. For these reasons transshipment other than by railway is very exceptional.

OBSTACLES TO TRADE.

The main obstacles seem to be the customs duties and the cost of transport. The French claim that they can to-day import foreign wheat, grind it, and sell it at a lower price than that of imported flour.

TRADE OUTLOOK.

So far as this consular district is concerned, there is, in my opinion, little prospect of opening up a market for American flour.

CHARLES W. WHILEY, JR.,
Consul.

ST. ETIENNE, *January 29, 1894.*

MARSEILLES.

PENDING TARIFF LEGISLATION.

An increase in the consumption of American flour in Marseilles and France necessarily depends to a great extent on the outcome of tariff legislation now under discussion in the Chamber of Deputies. For this reason a report upon the subject has been deferred with the hope that an early conclusion touching this very important matter would, if it did not leave the American producer in possession of the meager footing already attained in this market, at least determine whether he has any status at all. The question is not yet decjded, and what is said herein with reference to a possible increase of business at Marseilles is based upon the dubious hope that the extreme protectionists in the Chamber may not succeed in the enactment of the prohibitive duties which have been proposed.

Leaving this contingency out of consideration for the moment, and looking at the situation from the standpoint of the American miller, there is no apparent reason why a limited quantity of his product should not find sale in the territory of which Marseilles is the center of supply.

STANDARD OF LIVING.

Marseilles is a city of nearly 500,000 population and is situated in a country that not only does not produce all the wheat it consumes, but whose mills likewise have not the capacity of an annual output equaling the annual consumption of flour. It is affirmed that the people of southern France consume a greater quantity of bread per capita than any others of the world. Meats of all sorts are high in price and to the poor are in the nature of luxuries. Bread and the cheap wines of the country adjacent to Marseilles are the food and drink upon which the majority of the people subsist. The climate is pleasant—indeed, as compared to that in which the great American cities are located it might be looked upon as perpetual summer. By reason of this those who are in the habit of investigating such subjects declare that a man doing the work of an ordinary laborer might subsist well on a diet of bread and some of the cheap vegetables to be found here in all seasons, together with the wine referred to. It is certainly true that the proportion of bread consumed as compared to other active working centers, particularly in the United States, is excessively large; and whether tariff taxes are increased or lowered, at least for the moment, and until the French mills are able to supply the demand, a deficit remains to be filled from abroad. At most this deficit is not large, and, even without taking the element of legislation into consideration, the market is a restricted one and is competed for not only by Russia, Austria, and countries adjacent to France, but by Australia, as well as by the United States.

IMPORTS OF FLOUR AND WHEAT.

The following table is presented, indicating the total amount of flour imported into Marseilles for the years 1891, 1892, and 1893, with the different countries of origin:

From—	1891.	1892.	1893.
	Pounds.	*Pounds.*	*Pounds.*
Russia	705,540	588,940	.....
Austria-Hungary	1,499,080	1,342,000	715,660
Spain	823,680	316,140	.....
Turkey	661,320	.....	.....
Australia	732,820	487,080	.....
United States	54,340	239,360	29,040
Algeria	3,073,400	1,449,800	1,650,880
Italy	.....	.....	113,960
Other countries	481,580	836,220	765,160
Total	8,031,760	5,259,540	3,274,700

It will be observed that this table shows a large decrease in importations from year to year during the period given, the imports for 1893 being but little more than one-third the total for 1891. It does not follow, however, that this decline will continue, or that the capacity of the domestic mills providing the supply of home flour has been enhanced in a proportion equiva-

lent to this reduction of imports. An examination of the records shows that these imports have continually varied, viz: In 1882 the aggregate was 6,284,300 pounds, while in 1883 it fell to 2,040,540; in 1884 the amount was only 3,000,000 pounds, while for the succeeding year the record shows an increase to twice that amount.

A more important feature of this table is the decrease in American importations from 239,360 pounds in 1892 to only 29,000 pounds during the year just closed. A similar decrease occurred in the importations of American wheat, the aggregate for 1893 being but little more than half the amount for 1892, as will be observed by a reference to the following table:

Imports of wheat at Marseilles.

From—	1891.	1892.	1893.
	Bushels.	*Bushels.*	*Bushels.*
Russia	14,359,895	7,234,861	15,249,758
Turkey	3,368,933	4,093,122	2,006,810
India	3,954,346	2,135,767	2,823,714
United States	2,351,543	2,011,779	1,214,832
Other countries	5,447,670	5,169,458	3,189,243
Total	29,482,387	20,644,987	24,484,357

In view of our surplus of both wheat and flour, it is difficult to understand why there should be a falling off in the quantity of either disposed of in this market. The people are particularly friendly to America and Americans, so far as individual dealers and commercial bodies are concerned—I include by no means the protected miller or grain-grower—and are willing always to advance halfway in any effort to increase trade relations either in regard to breadstuffs or any other product of our country that might be successfully marketed in France.

EXCHANGE AND SHIPPING FACILITIES.

In the matter of monetary exchange the advantages are of the highest order, there being here a branch of the Bank of France and another of the Crédit Lyonnais, with perhaps thirty other well-founded financial institutions, many of them transacting a daily business with American houses through their correspondents at Paris.

Transportation facilities are exceptionally good, there being two steamship lines whose vessels leave each way monthly, plying directly between New York and this city; while there are nearly a dozen companies accepting freight from New York to Mediterranean points by way of England, where, however, transshipment is necessary. In addition to these there are any number of sailing vessels plying between Marseilles and various American ports, producing competition sufficient to enable the shipper to exact favorable rates in either direction at any season of the year.

OBSTACLES TO TRADE.

Many dealers have been interrogated concerning the popularity of the different brands of American flour that have been offered for sale in this market as compared to Russian, Austrian, and other foreign flours with which ours compete. It is urged by some that the American flour handled here is deficient in gluten, but it is generally agreed that the comparison of similar grades is by no means to the discredit of the American miller; and the latter, with a favorable comparative status already established, and, touching tariff exactions, standing on an equal footing with other nations, it seems would have against him only the element of distance, and consequently greater transportation costs. Whether or not the skillful application of new methods or other resources at his command can be made to overcome this obstacle his own experience will enable him best to judge. It seems reasonably certain that if he can reach this market on an equal footing with competitors in the matter of cost, he can hardly fail to meet with such success as the limited market affords. It would hardly pay to send here the finer grades of flour, by reason of the fact that these are used only for pastry purposes, for which flour from the white, beardless "Suzelle" wheat of Provence and Algeria is exclusively employed. For bread-making the market pretends to want the best; but here, as in other communities where baking is done exclusively at the public bakers, there is no demand for fine flours unless it is sold at the price of poor. The successful operator is he who sells the greatest number of kilograms for the smallest number of francs.

TRADE OUTLOOK.

The limited character of this market does not invite extensive operations in foreign flour, but the splendid location of this city as a distributing point for southern Europe could be utilized by the American milling trade as a base of supply for many communities outside of France.

The practical feature of these inquiries, however—"what are the obstacles in the way of an extension of trade" and "what the prospects for doing a more extensive business in American flour"—is absolutely dependent upon legislation now under discussion in the Chamber of Deputies, whereby it is proposed to increase the wheat duties from 5 to 8 francs per 100 kilograms and make the duty upon flour, already double that upon wheat, virtually prohibitive. If these proposals become law American flour can not be successfully marketed at Marseilles or elsewhere in France.

CLAUDE M. THOMAS,
Consul.

MARSEILLES, *February 12, 1894.*

LIMOGES.

STANDARD OF LIVING.

The standard of living in this district is comparatively high. The bread is usually made from wheat flour, of which there are several grades. The cheaper varieties are those most employed, the working people buying the "mélée." Rye flour is more commonly used in the country districts and by the poor in the towns and cities. American flour would undoubtedly have the preference, and is readily bought by the best bakers whenever it can be obtained, but it is so mixed by the *minotiers* with cheaper grades that as "American flour" it is hardly known.

QUALITY OF FLOUR USED.

The quality of flour in general use is of an inferior grade. The cheaper varieties, such as native and Italian, are principally employed.

IMPORTS OF FLOUR AND WHEAT.

It is exceedingly difficult to state with any accuracy the amount of American wheat or flour imported into this interior port. In the department of the Dordogne, No. 2 winter wheat is imported in considerable quantities. It is chiefly used for bread-making. This flour is very satisfactory to the consumers, and is exceedingly popular throughout the department. Very little Hungarian or Russian wheat finds its way to this market.

EXCHANGE FACILITIES.

The facilities for monetary exchange are excellent. The majority of the importers will give confirmed credit on Paris or New York.

OBSTACLES TO TRADE.

The chief obstacle in the way of importing American wheat and flour into this district is the heavy and recently increased duty that has been placed thereon.

TRADE OUTLOOK.

The prospects for doing a more extensive business in American wheat and flour in this district are not very good, although the trade in American wheat is better than in flour. The reason of this is that, inasmuch as this is a cattle-raising country, wheat bran is an important item, and is counted upon in fattening the animals for the market.

GENERAL REMARKS.

There seems to be a tendency on the part of peasants to leave the country districts to find work among the industries in the towns and cities. While there may have been an increased acreage planted in wheat, owing to the destruction of many vineyards by the numerous enemies of the vine, it has been recently stated in the Chamber of Deputies that it would be better for France to buy her wheat than to raise it. As manufacturing increases

and industries are developed there will, of necessity, be a decrease in bread-producing stuffs. France, unlike other countries, does not increase in population. Almost all the French land requires to be heavily fertilized and tilled to its utmost capacity in order to render a profit in grain-growing, and the growing of beets for sugar or alcohol and forestry are found to be more remunerative. Wherever it is possible vineyards will replace wheat fields. The wine harvest of 1893 was so exceptionally good that many farmers are considering the advisability of turning their wheat fields into vineyards again.

WALTER T. GRIFFIN,

LIMOGES, *March 5, 1894.* *Commercial Agent.*

PARIS.

STANDARD OF LIVING.

The standard of living in France is high, as compared with that which prevails in the other continental countries of Europe, and even as compared with the average of the various standards existing among the different classes of the population and the different sections of the United States. It is materially higher in this consular district, including Paris and its environs, than in other parts of France, excepting, perhaps, in two or three large cities. In all the cities and large towns it is higher than among the peasantry of the rural districts; but even the peasants, who have been forced by the depression of agriculture which has existed for several years and has now culminated in a veritable crisis to reduce their consumption, are still better nourished than those of the countries south and east. In Paris, and throughout France in a somewhat less degree, the cost of the chief articles of alimentation is high—higher in many instances than in the United States, and higher for almost, if not quite, everything than in Belgium, Italy, Switzerland, Spain, England, or, perhaps, any other country in Europe.

This being the case, it is amazing that the masses of the people are able to supply themselves with such a substantial and nourishing diet. That they do, must be set down to the traditional national characteristics of thrift and industry—characteristics which were never more strongly accentuated than at the present time. In France the masses waste nothing. Their time is as carefully utilized as their supplies, and the latter, by dint of care and skill in their preparation and use, are made to serve wants which few American housewives, however thrifty according to our standards, could supply as fully with twice the resources. In France, too, among the classes of wage-earners and other persons of small incomes comprising the bulk of the population, the husband and father is not the sole bread-winner of the family; every member, male and female, who is old enough to do so, contributes in some way to the maintenance of the household. Thus, while the prevailing rates of wages are lower than in England, and, in a greater degree, than in the United States, there is far less difference in the amount available for the support of a family than appears from current statistics.

Wages, as is well known, average considerably higher in France than in any other European country except England; but, considering the superior intelligence of French labor and its consequent productiveness, it is certainly cheaper, measured by its results, than that of most of the continental countries. The commanding importance of bread in the French dietary is traditional, and so well known as not to need emphasizing here. The French are preëminently a nation of bread-eaters. Bread is the chief article of food throughout the country, and even among the wealthier classes is of the first importance. Whatever may be the other ingredients of a French meal, the bread and the wine are never absent.

The consumption of bread in France was discussed in a recently published paper by Mr. L. Grandeau, an economic authority of high repute. Estimating the population of the country at 38,000,000, which is regarded as a fair average for the decade 1881–'91, Mr. Grandeau classifies the inhabitants in seven categories as to age, and makes a careful estimate of the aggregate daily consumption of bread by each class. His table, which is based upon the conclusions reached by the eminent student and writer, A. de Faville, in his work, "La France Economique," and other high authorities, is as follows:

Age.	Number of inhabitants.	Daily consumption of bread per capita.	Aggregate daily consumption.	
		Grams.	*Kilograms.*	*Pounds.*
Under 5	3,496,000	100	349,600	770,868
5 to 10	3,401,000	300	1,020,300	2,249,761
10 to 15	3,344,000	400	1,337,600	2,949,408
15 to 20	3,218,000	600	1,931,160	4,258,207
20 to 60	19,893,000	700	13,925,100	30,704,846
60 to 80	4,253,000	500	2,126,000	4,687,830
80 and upwards	395,000	400	158,160	348,743
Total	38,000,000		20,847,920	45,969,669

M. Grandeau's explanations of this table are interesting, and not entirely irrelevant to the subject of this report. I translate a brief extract:

In estimating the quantities of bread stated as the daily ration of the individuals of each of these categories I am supported by physiological data, and, when they exist, in the figures given by the best authorities on such subjects. For the most numerous category—that of 20 to 60 years—I have adopted an average ration of 700 grams, inferior by 50 grams to the ration of the troops, which can be considered as that of the adult man in good health. This reduction from 750 to 700 grams seems to me justified by a double consideration.

In the first place, the 20,000,000 of persons comprised in this category are divided almost equally between men and women, and it is certain that the ration of the latter is materially inferior to that of the former. In the second place, their ages vary greatly, and the man of 50 to 60 years does not consume the 750 grams of bread which would be sometimes insufficient for the man of 20 to 25. In this calculation the quantities of flour consumed by the pastry-makers do not enter. There is no data upon which to estimate it; but on the other hand, I take no account of the considerable quantities of rye and buckwheat consumed, which, in some regions, are used almost to the exclusion of wheat. I believe, then, that the estimate of about 21,000,000 kilograms (46,297,000 pounds) as the daily consumption of

wheat and meslin bread in France is a maximum. This makes the annual consumption 76,090,000 metric quintals (16,774,601,000 pounds). The average daily consumption of bread per capita in Paris is put at 400 grams; in all France at 584.6 grams.

But large as is the consumption of bread in France, it is supplemented in Paris and the larger cities and to a considerable extent in the rural districts by a substantial diet consisting of wine, soup, meat, cheese, vegetables, and fruit. Coffee is almost universally drunk in the morning, and comprises, with bread, the entire "first breakfast."

QUALITY OF FLOUR USED.

French bread averages of very good quality. It is considered, the world over, perhaps, the best made. The choicest quality, which is consumed not only by the wealthy, but also very largely by the "middle classes," known as *pain de luxe*, is made of the best grades of white wheat flour, that made from Hungarian and American wheat being preferred, frequently with an admixture of French white wheat. Cheaper bread (*pain ordinaire*), which is consumed by the poorer classes, is made of inferior grades of wheat, chiefly domestic, and also, to a very great extent, of meslin (wheat and rye mixed in varying proportions). The *pain de luxe* is light and exceedingly palatable, but is probably less nutritious, as a rule, than the best of the *pain ordinaire*.

Bread is not made at all in the household. Practically every pound of bread eaten in France is supplied by the bakeries. The price of bread ranges in Paris from 32½ centimes (5 centimes = 1 cent) per kilogram for the poorest grade to 40 centimes for the best. In Belgium and England the price ranges from 18 to 25 centimes.

IMPORTS OF FLOUR AND WHEAT.

As the official statistics of importations are given for the calendar year, I am unable to present the figures as to the importations of American wheat and flour during fiscal years ending June 30. The following shows the importations for the calendar years 1890, 1891, and 1892; the figures for 1893 are not yet accessible:

Imports of flour and wheat into France during the calendar years 1890, 1891, and 1892.

Whence imported.	1890.	1891.	1892.
Wheat flour:			
United States.....pounds...	.....	49,072,320	36,466,950
Other countries.....do.....	69,998,790	114,515,962	57,353,330
Total.....do.....	69,998,790	163,587,272	93,820,280
Wheat:			
United States.....bushels...	6,650,863	29,966,320	36,974,410
Other countries.....do.....	32,121,060	42,058,029	32,259,036
Total.....do.....	38,771,923	72,024,349	69,233,446

There are no data upon which to base an estimate of any real value as to the proportion of wheat and flour imported from the United States or elsewhere into France which is consumed in this consular district (Paris).

It is, of course, very much greater than the proportion of the population of this district to that of France.

Undoubtedly the greater part of the American wheat and flour brought to France finds its way ultimately to Paris. The remainder is chiefly consumed in three or four other large cities and at the watering places, such as Nice, Vichy, Biarritz, etc.

DUTIES.

As I write, the import duties on wheat and flour have just been materially increased by the French Parliament after one of the most brilliant and comprehensive debates in its history, in which the causes of the existing depression in French agriculture were exhaustively discussed, and all phases of the economic question presented by some of the ablest men in the Republic.

Several propositions for an increase of the customs duty on wheat and its derivatives were before the Parliament. The Government proposed an increase of the duty on wheat from 5 francs to 7 francs per 100 kilograms (220.46 pounds).

The *commission des douanes* (committee on tariff) reported favorably a measure fixing the duty at 8 francs per 100 kilograms, with a provision for a sliding scale under which, with every increase of 50 centimes (about 10 cents) per 100 kilograms in the market price of wheat above 25.50 francs (about $4.92), a corresponding reduction of 50 centimes in the duty should be made, until, with wheat above 30 francs ($5.79), the duty should be practically abrogated.

A fixed duty of 10 francs per 100 kilograms was strongly urged, and a proposition to give the Government a monopoly of the importation of wheat was also earnestly advocated. The result was the adoption of the Government's proposition by a vote in the Chamber of 358 ayes against 152 nays, and in the Senate of 189 ayes against 32 nays. I give these figures because an important element in the question of the future demand for American flour and wheat in France is the permanence, or otherwise, of the increase in duties recently voted, the prospect for which may be inferred from the relative numbers of its supporters and opponents in the present Parliament.

The following shows the new tariff per 100 kilograms on farinaceous food stuffs, as well as that which it replaces:

Description.	Old rates.		New rates.	
Wheat, spelt, and meslin:	*Francs.*		*Francs.*	
Grains	5	$0.965	7	$1.35
Crushed and boulanges (ready to grind, containing more than 10 per cent of meal)	8	1.54	11	2.12
Flours:				
At rate of extraction of more than 70 per cent	8	1.54	11	2.12
At rate of extraction of between 70 and 60 per cent	10	1.93	13.50	2.61
At rate of extraction of 60 per cent and under	12	2.32	16	3.09
Sea biscuit and bread	5	.965	7	1.35
Grits and oatmeal, pearled and hulled	12	2.32	16	3.09
Millet, ground and cleaned	.....	.....	6	1.16
Italian pastes (semoules and pates)	8	1.54	13	2.51

This schedule applies to all the products named shipped directly to French ports from the country of origin.

EXCHANGE AND SHIPPING FACILITIES.

It is scarcely necessary to say that the facilities for monetary exchange with France are of the best, and adequate to any demand that can possibly be made upon them, and the same is true of the transportation facilities, direct communication by numerous lines of steamers and sailing vessels existing between the ports on both the Atlantic and the Pacific coasts of the United States and the several ports of France on the English Channel, the Atlantic Ocean, and the Mediterranean Sea.

The expense of transportation from the United States to France has been steadily declining for years. In 1879 the cost of carrying a ton of wheat from New York to Havre was 56 francs ($10.81); it is now 10.05 francs ($1.94).

A similar decline has occured in the charges for the transportation of flour and other commodities.

This cheapening of transportation has greatly facilitated the exportation of food stuffs from the United States to Europe, but its effect has been to a great extent neutralized by the increasing competition of Russia, India, and the Argentine Republic in the wheat markets (and of Hungary in the choicest grades of wheat); also, by the raising of the French tariff, which is admitted to have been done, in part at least, by way of retaliation for the hostile tariff legislation of the United States in 1890.

OBSTACLES TO TRADE.

The obstacles to any very great extension in the immediate future of the French market for American flour have been indicated more or less clearly in the foregoing. They may be summarized (not necessarily in the order of their importance) thus:

(1) The magnitude of the French milling industry, which is an important factor in the business of the country (and in politics when its interests are directly affected). This industry is widely diffused throughout France, and is in close touch with the agricultural interests in the country and with the financial interests in the cities. It is estimated that there are 22,000 mills in France.* Their aggregate milling capacity is claimed to be sufficient to supply all the demands of the country for flour. The industry is well organized. When the recent agitation for an increase in the duties on wheat began, the milling interests were at first hostile, but they afterwards changed their attitude and united with the agriculturists in supporting the increase on condition that a proportionate increase should be conceded on flour and bread, which was done.

* The number of mills in France "occupied exclusively with the grinding of grain" is given further on in this report at 50,000.

(2) The new duties on wheat and flour are the highest of any country in Europe, and, with the discrimination as between wheat and flour, raise a formidable barrier against an increase in the importations of the latter from America or elsewhere.

(3) The normal consumption of wheat, for all purposes, in France is estimated at from 118,000,000 to 120,000,000 hectoliters (334,860,400 to 340,536,000 bushels) and the domestic production at from 98,000,000 to 108,000,000 hectoliters (278,104,400 to 306,482,400 bushels), leaving a deficit of only 12,000,000 to 20,000,000 hectoliters (34,053,600 to 56,756,000 bushels) to be supplied by importation, either in the form of flour or wheat. For the reasons already set forth, this importation is more likely to be made in the form of wheat than of flour, and with the increasing wheat production of Russia, India, the Argentine Republic, and Hungary the near outlook for a greatly increased demand for American flour can hardly be considered flattering.

(4) Another important element enters into the actual situation, as it affects the immediate future, and that is the immense stocks of wheat and flour now in this country. It is claimed and not denied that the quantity of wheat now in the country exceeds 100,000,000 hectoliters, or about as much as the average annual domestic production. The importations of wheat from September 1, 1893, to February 15, 1894, are officially stated at 8,762,267 metric quintals (32,196,950 bushels).

In the recent discussions in the Chamber of Deputies on the proposed increase of duties on wheat and flour, the Minister of Agriculture declared that, in his opinion, an important influence in maintaining the depression in the price of wheat was the large accumulation of American flour in the warehouses.

TRADE OUTLOOK.

I do not wish to be understood as saying that intelligent efforts to increase the exports of American flour to France will be labor lost. There will always be, in spite of artificial obstacles, a considerable and probably a steadily increasing demand for the choicest grades of our flour, which, apparently, have no serious competition to fear except that of Hungary. These choice grades have a high reputation in France, and, with systematic efforts to push them, there will no doubt be a steady increase in the sales from year to year. In the event that the existing American tariff, which bears so heavily upon various French manufactures is materially modified, the already formidable opposition to the new French tariff on wheat and flour will be greatly increased, and if the new duties fail, within a reasonable time, to produce the results predicted by their advocates, it is not improbable that they will be abrogated. And thus, while the immediate future of the French market for American flour is not flattering, it contains possibilities which seem to justify continued efforts on the part of American millers.

THE MILLING INDUSTRY OF FRANCE.

By way of supplement to the foregoing report a few additional facts as to the dimensions of the milling industry of France may be pertinent. They are gathered from a brochure on the subject published since the preparation of this report. In this publication an interesting account is given of the origin and evolution of this industry in France.

Among the ancient Gauls the grain was not ground, but was eaten in its natural state. Later the unground grain was cooked and eaten in "pates" or in puddings. The first attempts to convert the grain into meal or flour followed the system in use among the ancient Greeks, who covered stones with a light layer of damp grain, which was then dried in the sun and afterwards crushed with a heavy roller of stone or metal. The next stage in the evolution of the mill was the pounding of the grain in mortars with wooden pestles. Then came the flat millstones, which were made to revolve, the one on the other, at first by hand and later by animal power. Windmills—of which quite a number are still in operation in Brittany, and which are said to have been in use in the Orient long before the Crusades—were at this epoch introduced into France and generally utilized until about the middle of the eleventh century; then, because of their irregularity, they began to be little by little supplanted by water mills. These were, at first, operated on boats anchored in bodies of water, but later were fixed in permanent constructions on the banks of streams. It was not until 1780 that the art of modern milling was invented, as is claimed, by two Frenchmen—Col. Ducrest and the engineer Favre. Their attempts, however, to introduce the new process into France were futile, and they therefore went to the United States, where, with the coöperation of the American engineer Oliver Evans, they established the first mill in the world using the *monture basse.*

The first mill of this kind in England dates from 1789, and the first in France only from 1816. Since that time three kinds of mills have been in use in this country—windmills, water mills, and steam mills. Except in Brittany, where windmills do the grinding for the small farmers, these mills have practically fallen into desuetude in France. A steam mill was, it is claimed, built in France as long ago as 1742, but it was not until 1816 that the development of these mills began.

The grinding was all done by millstones until 1873, when the system of porcelain cylinders, supplanted later by metal (steel or *fonte dur*) cylinders, was introduced. This system had been in use in Switzerland since 1832 and in Hungary and Italy for a number of years prior to 1873.

A certain number of mills now use the cylinders; in others the wheat is ground by millstones, and compressors with cylinders are used to convert the grits into flour.

The traité pratique de la meunerie gives the following comparative results obtained per 100 kilograms (220.46 pounds) of wheat by millstone and by cylinder grinding:

Products.	By millstones.		By cylinders.	
	Basse (low).	Haute (high).	Basse (low).	Haute (high).
	Kilograms.	*Kilograms.*	*Kilograms.*	*Kilograms.*
Flour of grits	.....	30	.....	36
First quality	68.4	10	72	12
Second quality	2.55	.....	2	.....
Third quality	4	34	1	25
Fourth quality	.....	1	.....	2
Issues	21	22	22	21
Waste	4.05	3	3	4
Total	100	100	100	100

The cylinder mills yield a greater proportion of superior flour than the other mills, and their product is in greater demand among bakers and pastry cooks, especially in Paris. It produces not only a finer quality of bread and other pastry, but it yields from 3 to 4 per cent more bread than flour.

There are in France about 50,000 mills occupied exclusively with the grinding of grain.

The annual consumption of wheat in France is about 120,000,000 hectoliters (340,536,000 bushels). These 120,000,000 hectoliters represent, at the average weight of 77.5 kilograms to the hectoliter, 93,000,000 metric quintals, which, at the present price of 20 francs per quintal, form the respectable sum of 1,860,000,000 francs ($358,980,000). These 93,000,000 quintals of wheat when ground into flour produce—

Description.	Per cent.	Quantity.	Price per quintal.		Value.	
Flour:		*Metric quintals.*	*Francs.*		*Francs.*	
First quality	70	65,100,000	30	$5.790	1,953,000,000	$376,929,000
Second quality	2	1,860,000	24	4.632	44,640,000	8,615,520
Third quality	3	2,790,000	18	3.474	50,220,000	9,692,460
Issues (bran, etc.)	21	19,530,000	14	2.702	273,420,000	52,770,060
Waste	4	3,720,000	.....	.....	.....	.....
Total	100	93,000,000	.....	.....	2,321,280,000	448,007,040

The millers not only grind wheat, but also the inferior grains, such as rye, barley, maize, buckwheat, oats, etc. In adding the value of these different grains for the quantity that passes annually through the mills we reach a figure above 2,500,000,000 francs ($482,500,000). These figures are made upon the basis of the unprecedentedly low prices of grain prevailing this year. At the prices prevailing in a year of scarcity they would exceed 4,000,000,000 francs ($772,000,000).

The French milling industry is, as stated in the body of the foregoing report, thoroughly organized. In 1886 the National Association of French Millers (l'Association Nationale de la Meunerie Française) was founded. Its headquarters are at Paris, and it numbers more than 3,000 members, including the owners of all the great mills in the country. This powerful association holds an annual congress in Paris (in September), where the various questions of practical or commercial interest to the trade are discussed. In connection with the congress a splendid exposition is made of milling apparatus, tools, and materials. This organization is constantly on the alert against foreign competition in the French market, and is a factor always to be considered by those who are interested in extending the demand for American flour in France.

SAMUEL E. MORSS,
Consul-General.

PARIS, *March 16, 1894.*

ROUEN.

STANDARD OF LIVING.

People in this district prefer, and generally manage to eat, bread made from the best quality of flour. In city and country alike bakers generally supply the grocers and consumers.

Consumers pay no attention to the origin, but regard the quality of the flour used by bakers and pastry cooks. They have no prejudice against American flour, but are deterred from its use by the increased cost. The few specimens of American flour received here were of the best quality, and in that respect gave satisfaction.

QUALITY OF FLOUR USED.

Three kinds of flour are used. Those who live well require *pain de luxe* (dainty bread), very white and crisp, which can be made only by mixing local with American or Hungarian flour. Hungarian flour is more easily obtained, and therefore is chosen by the bakers and pastry cooks dealing in fancy bread and biscuits. The mixture is generally one-half superior French and one-half Hungarian. Strange as it may seem, a celebrated caterer in New York receives regularly shipments of Hungarian flour from the port of Rouen, which is a considerable depot for the receipt and distribution of this flour, as shown in accompanying tables. I have good authority for stating that the same results can be obtained by the substitution of the American flour (best brands) for Hungarian.

In some parts of the country a bread is made from flour out of which only 25 per cent of bran is extracted. This makes a wholesome and cheaper bread. A large proportion of the best bread sold by town bakers is made from French wheat. This bread is made in two ways—with leaven prepared

in the evening and allowed to work from 10 p. m. to 3 a. m., the hour for commencing work in bakeries; the other, mixed with yeast just before kneading.

There is but little change from year to year in the form, quality, and mode of preparation of bread, although many of the bakeries have the modern improvements for kneading the dough and for working with facility, rapidity, and economy.

A bakery capable of using a ton of flour per day, working upon 5-pound loaves only, would turn out about half the quantity of rolls and crusts; the profit on the latter, however, would be much greater. The former brings 80 centimes (16 cents) for 5-pound loaves, the latter double the price or more, as the buyer of the ordinary bread can force the baker to give him full weight by going to the shop, whereas the customer who receives the bread at his domicile can not insist upon full weight. Such a bakery, with ovens, tools, dwelling, and shop, would cost from $4,000 to $6,000, depending upon locality. The headman is paid from 40 to 50 francs ($7.72 to $9.65) a month, and the second man who assists, and, in emergency, takes the baker's place, from 15 to 30 francs ($3.90 to $5.79) a month, board and lodging included. Small boys who deliver the bread are fed and lodged, and are paid from 5 to 15 francs (96.5 cents to $3.90) per month.

The most primitive style of bookkeeping, dating back to the discovery of bread, still prevails with bakers. On delivering bread the buyer presents a twig of tree or small piece of thin wood precisely like one carried by the baker's boy; these are placed side by side and knotched with a knife, and in case of difference the silent sticks give their evidence.

Many bakers are indebted to millers, and therefore can not act independently in regard to purchase of flour.

The subject of bread is attracting much attention on the part of physicians and savants and agricultural societies. These claim that the animals have the most nutritious and wholesome portion of the wheat for their share, while the overrefined portion only is made into an extremely white bread, which alone satisfies alike the poor and the rich. Much of the regulation bread made for the use of soldiers in garrison is brown, and contains a portion of middlings. Although many of the soldiers are from the country and have been brought up on this bread, they sell it to the camp sutlers or grocers and buy white bread. Therefore this movement will not be likely to materially change the deep-seated prejudice against colored bread.

Many of the mills are run by water power very economically. In the center of this city there is a large and imposing mansion on a principal street, with a *porte-cochère* entrance, closed by doors similar to those of the most fashionable dwellings. Within these doors is a courtyard, where the large four-horse wagons unload wheat, and can load with flour in sacks in from 3 to 5 tons lots for delivery to the bakers. A portion of the building consists of fine apartments, in which the families are luxuriously accommodated. The stream which runs the mill flows beneath, and is entirely concealed.

IMPORTS OF FLOUR AND WHEAT.

Rouen.—The following statement shows the imports of flour and wheat at Rouen during the years ending June 30, 1891, 1892, and 1893:

Whence imported.	1891.	1892.	1893.
Wheat flour.	*Tons.*	*Tons.*	*Tons.*
Austria-Hungary	9,378	12,816	6,550
United States	.....	1,020	.....
Other countries	10	2	.....
Total	9,388	13,838	6,550
Wheat.			
United States	11,936	183,409	5,566
Russia	24,295	.....	513
Roumania	18,635	9,650	2,117
Australasia	22,350	81,381	5,261
Argentine Republic	4,761	4,789	1,319
Other countries	29,105	22,823	322
Total	111,082	302,052	15,098

Boulogne.—The wheat flour imported into Boulogne during the three years under consideration consisted of 10 tons, imported in 1893. No wheat was imported in 1891, but 30 tons and 376 tons were imported in 1892 and 1893, respectively.

Calais.—No wheat flour was imported during the three years ending December 31, 1893, but during the same years 34,386 tons of American wheat were imported, and 27,796 tons from other countries.

Dieppe.—During the year 1893 American wheat was imported into Dieppe to the amount of 22,197 tons, and wheat from other countries to the amount of 3,020 tons. No wheat was imported in 1891 and 1892, nor was there any wheat flour imported during any of the three years.

EXCHANGE FACILITIES.

The exchange of money on a large scale can be readily and favorably effected through Parisian banks. The small banks and branch establishments located in the towns are exorbitant in their charges and contracted in their ideas of banking business.

OBSTACLES TO TRADE.

The tariff on flour favors the French millers to a great extent. The millers come into direct contact with the agriculturists, and exert a great influence over that large body of men. They also give or withhold credit to bakers requiring help. The interest of the bakers and consumers would favor the lowest rate and the competition arising from the importation of foreign flour. Many consumers understand that under the plea of protection a large revenue is thus brought to the aid of the Government, which is strained to the utmost to equalize its budget, and they see in the bread tax a happy issue out of a position which might call for a heavier tax upon their incomes. Another obstacle arises from the difficulty of purchasing and storing a cargo at a time for distribution throughout the country.

Bakers, pastry cooks, and biscuit manufacturers would like to receive from 8 to 10 tons at a time. From Rouen and Calais such distributions could be made, as lines of canals and railroads diverge from those centers to all of the rich towns adjacent.

The best French flour costs to-day per 100 kilograms (220 pounds) 28.25 francs ($5.45); Hungarian (very best), 45 francs ($8.69); American, 39 francs ($7.53)—delivered at the Calais station. This difference between 28 francs and 39 francs affords an opportunity for American flour to take the place of French, and really to replace the Hungarian. An important obstacle in the way of the introduction of American flour is the depreciation of silver in India, Brazil, and other countries. For instance, should a farmer at Buenos Ayres sell a shipload of wheat to a miller at Rouen for 5 francs (96½ cents) per 100 kilograms, it would not be a large price, relatively, but as the payment would be in gold, the premium upon which is 220 per cent, the profit would be very fair.

As before stated, the flour mills are driven cheaply by water or wind, and good roads assist the transportation of the grain and flour.

TRADE OUTLOOK.

It is well known that Paris, Lyons, and other large cities consume relatively large quantities of American flour, and I believe that active canvassing might have favorable results in smaller towns and among biscuit manufacturers, who highly appreciate a very white, crisp, and rich flour. These factories have, in a large measure, replaced the supply of foreign biscuits. A large and successful factory employing 500 men exists at Calais, and the proprietor bears me out in the above assertion.

The American flour (branded "Oregon") experimented with was found to require but little water, and did not, while baking, change the form, design, or print on the biscuits.

Bakers and pastry men would prefer the American flour as a matter of economy. A regular supply of the flour in small quantities would have to be provided.

The French millers deliver their flour in sacks containing 100 kilograms (220 pounds) and in 150-kilogram sacks. The Hungarian flour is also received in sacks. These sacks could be returned, as the bakers have receptacles for flour. I have not seen a barrel of flour since I have been in France. It would not do to undertake any change in the mode of delivery to which they have been accustomed.

Should firms of American dealers desire to make such arrangements, they would find in all large and moderate sized cities a syndicate of bakers who would gladly coöperate with them, and they would find in my district the consul and the consular agents willing to assist such an undertaking to the extent of their ability.

CHAS. P. WILLIAMS,
Consul.

ROUEN, *March 8, 1894.*

ROUBAIX.

STANDARD OF LIVING.

The standard of living in this consular district will compare favorably with that of other parts of France, but is considerably lower than that which prevails in the United States, if the basis of comparison be the middle and working classes, who, as far as the consumption of flour and its products is concerned, form, by far, the most important part of the population. If the standard of living be indicated by 10 in the United States, it would probably be near the truth to indicate it by 7 in France. "Standard of living" is used here simply in relation to the consumption and quality of food and clothing, wages, and hours of labor. The family budgets herewith following were secured with the object of affording some insight into this question. An examination of them will show that the proportion of 7 to 10 is not far out of the way, if used to indicate the relation which the standard of living in France bears to that in the United States.

Budget No. 1.—Family consisting of five—father, mother, one boy 15 years old, and two girls of 12 and 10 years. Occupation of father, engineer; wages, $1 per day; working days in the year, 365; working hours per day, twelve. The son is an errand boy in a store, and receives $5 per month. This family occupies a house consisting of four rooms and a cellar, situated on a narrow court, but with plenty of light. The interior of the house was clean and neat. The breakfast consisted of coffee and bread; dinner at noon, of soup, meat, vegetables, and beer; supper, of buttermilk and bread and butter.

The annual income and expenses of the family are as follows: Income—wages of father, $365; wages of son, $60; total, $425; expenditures—meat, $127; vegetables, $37; bread, $36; beer, $70; fires, $13; clothing, $30; furniture, $8; medicine, $6; amusements, $5; rent, $60; other expenses, $31; total, $417. This shows an excess of income of $8.

Budget No. 2.—Family of five, consisting of father aged 40, mother aged 38, and three young children. Occupation of father, warehouseman; wages, $1.10 per day; works 305 days per year, and eleven hours per day. This family occupies a house of four rooms, on a court. The wife was evidently not a good housekeeper, the rooms being slovenly and the children dirty. Their breakfast consisted of bread, cheese, and beer; dinner, of meat, beef or mutton, bread, potatoes, and beer; supper, of coffee, bread, and butter.

The annual income and outlay of this family are as follows: Income—wages of father per year, $335.50; expenditures—rent, $60; meat, $88; bread, $40; vegetables, $40; beer, $18; clothing, $25; church, $1.55; medicine, $2; fires, $12; amusements, $10; other expenses, $30; total, $326.55. This shows an excess of income of $8.95.

Budget No. 3.—Family of eight; father aged 39, mother aged 38, and six children, the oldest being 8 years. Occupation of father, conductor on a street railway; wages, 80 cents per day, working 360 days a year and 12 hours per day. This family occupies a house of three rooms in a suburban village of Roubaix. It was evidently the home of misery, for, although the mother was neat and the children clean, they had the appearance of being insufficiently fed and clothed. I was informed that the husband spent his earnings in the cafés, which accounts for the large item for amusements. Much of their clothing was given to them. Their breakfast consisted of coffee, bread, and butter; dinner, of meat (for the husband), soup, bread, and beer; supper, of soup, made of buttermilk, bread, and butter.

The annual income and outlay of this family are as follows: Income—wages of father per year, $288; expenditures—rent, $38.40; meat, $36; vegetables, $60; bread, $105; beer, $20; fires, $25; clothing, $10; medicine, $10; amusements, $20; total, $324.40. This shows an excess of expenditures over income of $36.40.

Budget No. 4.—Family of eight, consisting of father aged 55, mother aged 55, three sons aged 26, 23, and 18 years, and three daughters aged 28, 25, and 16 years. Occupation of father, sons, and daughters, weavers. The father earns 80 cents per day, the sons each 70 cents, and the daughters each 30 cents per day, eleven hours constituting a day's work. This family lived comfortably in a house of five rooms on a respectable street in a small town. There were many of the comforts of home, and everything was clean. The mother cared for the house. Their meals were abundant, and for each one half a liter of beer was served with every meal.

The annual income and outlay of this family was as follows: Income—father (290 days at 80 cents), $232; three sons (290 days at 70 cents each), $609; three daughters (290 days at 30 cents each), $261; total, $1,102; outlay—rent, $70; meat, $140; vegetables, $20; bread, $100; coffee, etc., $40; beer, $80; wine, $30; fires, $30; clothing, $300; furniture, $30; medicine, $30; amusements, $40; taxes, $9; other expenses, $50; total, $969. This shows an excess of income over outlay of $133.

Budget No. 5.—Family of three, consisting of father, mother, and son, the two former aged, respectively, 45 and 42 years, and the son 16 years. Occupation of father, clerk in men's furnishing goods store; salary, $600 per year; hours of work per day, eight. This family inhabited a comfortable house in Lille. The son was in a boarding school. Their meals consisted of chocolate, bread, and butter for breakfast; soup, meat, vegetables, and beer for dinner; and cold meat, cheese, bread, and beer for supper.

The annual income and outlay of this family were as follows: Income—salary of father, $600; outlay—rent, $120; beef, $32; other meat, $68; vegetables, $36; bread, $36; coffee, eggs, etc., $50; beer, $38; wine, etc., $12; fuel, $12; clothing, $50; furniture, $30; medicine, $10; education, $40; amusements, $20; taxes, $16; miscellaneous, $30; total, $600.

Budget No. 6.—Family of four, consisting of husband, wife, husband's mother, and wife's sister. Occupation of husband, waiter in hotel; wife's occupation, domestic; the sister, a factory employé. The husband earns in gratuities, etc., with his meals, $260 per year, and works twelve hours a day, Sundays included; the sister earns 40 cents a day for 310 days; the wife earns about $16 per month, her meals not being included. This family, by the showing of the schedule, are in fortunate circumstances, for, although their income was small, they managed to save more than one-half thereof. Their annual outlay is small, because the husband takes no meals at home and the wife has a good deal given to her where she works. The mother takes care of the house. The house is small, consisting of four rooms, situated on a narrow court. The husband and wife are young, newly married, and without children. Their ambition is to save enough to open a small café.

The annual income and outlay of this family are as follows: Income—husband, $260; wife, $192; sister, $124; total, $576; outlay—rent, $43.20; meat, $15; vegetables, $30; bread, $38; coffee, etc., $20; beer, $18; fuel, $20; clothing, $40; furniture, $5; medicine, $5; church, 50 cents; amusements, $15; taxes, 50 cents; miscellaneous, $20; total, $270.20. This shows an excess of income over outlay of $305.80.

Budget No. 7.—Family of five, consisting of father aged 33, mother aged 30, and three children, the oldest 7 years old. Occupation of father, carpenter; wages, 85 cents per day of eleven hours. He averages 300 days per year. This family occupies a house of four rooms, with a small garret, in a very poor quarter of the town. The husband is a socialist, and quite an intelligent man, well posted upon the political topics of the day. Their meals consist of coffee, bread, and butter for breakfast; meat or soup, vegetables, bread, and beer for dinner; and potatoes or cheese and bread and butter and beer for supper.

The annual income and outlay of this family are as follows: Income—wages of father, $255; outlay—rent, $40; meat, $40; vegetables, $30; bread, $75; beer, $25; fuel, $15; clothing, $20; miscellaneous, $7; total, $252. This shows an excess of income of $3.

Many other schedules were secured, embracing twenty or more occupations, the foregoing being selected as containing elements of interest, and as representing average conditions. It will be noted that the item of rent in most cases is quite low. It is even still lower where the family rents a house in the country. I have seen houses with small gardens, etc., which rent for $30 per year, and some even for $20. The hours of labor are rather longer than in the United States, and, all things considered, their standard of living, in its physical aspect, is considerably lower than with us.

IMPORTS OF FLOUR AND WHEAT.

The imports of flour and wheat at the port of Dunkirk (the port for Roubaix) during the calendar years 1891, 1892, and 1893 were:

From—	1891.	1892.	1893.
Flour.	*Pounds.*	*Pounds.*	*Pounds.*
United States	1,916,200	.....	.....
Germany	386,100	233,200	.....
Argentine Republic	208,340	.....	.....
Total	2,510,640	233,200	.....
Wheat.			
United States	720,595,040	442,397,197	1,025,860,000
Russia	24,648,140	.....	63,034,400
England	3,732,740	1,726,380	8,461,200
Roumania	32,831,700	37,051,823	87,601,800
Turkey	12,869,340	.....	39,404,200
Egypt	2,286,460	1,103,234	21,183,800
India	241,050,620	96,613,215	501,316,200
Australia	54,507,740	1,581,690	265,634,600
Argentine Republic	24,372,920	11,759,383	367,320,800
Algeria	7,000,840	873,400	1,375,000
Total	1,123,895,540	593,106,322	2,381,192,000
Total in bushels	18,731,592⅓	9,885,106	39,686,533⅓

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange in this district are good, the principal banking institutions having correspondents in the United States or Paris.

There is no regular line of steamers between the port of Dunkirk and the United States, though "tramp" steamers sometimes unload cargoes from United States ports. The wheat landed at that port is brought in sailing vessels. This district is connected by rail with all other parts of France, and hence the facilities for bringing merchandise here are as perfect as could be desired.

OBSTACLES TO TRADE.

The question of a market for American flour in France is one of price and quality. It will generally be conceded, I believe, that French flour is second to none, equal grades being compared. From the earliest times French bread has had a reputation which extended far beyond the limits of the country. It is to-day imitated the world over, and generally with indifferent success. This fact, aside from the skill and experience necessary in making it, would seem to indicate a superiority in the flour. But, granting an equality on the part of flours seeking a market in France, the questions of cost of production and landing it in the country still remain to be eliminated. In order to place before American exporters and millers some of the facts pertaining to these questions, I have interviewed millers in many parts of this consular district with a view to obtaining information as to the cost of pro-

ducing flour of various grades. As the replies were generally uniform, not much doubt can exist as to their accuracy.

The highest and lowest market prices paid for wheat are $1.86 and $1.66 per 100 pounds. In converting 100 pounds of wheat of first quality into flour the estimates as to the product vary as follows: Fifty-five to 60 per cent of flour of first quality, 12 to 17 per cent of flour of second quality, and 21 to 28 per cent of bran and refuse. The market price for the higher grades of flour vary from $2.28 to $2.54 per 100 pounds, that of inferior grades varying from $1.93 to $2.28, and bran averages $1.14. Taking the average of these results, the product of a grind of 100 pounds of grain would be worth $1.97, the finished products having a value of 21 cents more than the raw material.

From 100 pounds of wheat at $1.76 there would result from the grind 57½ pounds of flour of first quality, 14½ pounds of flour of second quality, and 24½ pounds of bran, worth, respectively, $2.41, $2.10, and $1.14 per 100 pounds, or a total value of $1.97, as above stated.

DUTIES.

The duty upon flour of the higher grades is $1.40 per 100 pounds. Deducting the duty from the average price of these flours ($2.41 per 100 pounds), the figure at which the exporter must land his flour in this country stands at $1.01 per 100 pounds. From this figure should also be deducted the cost of transportation and other expenses. After making these deductions the net price to be realized by the American exporter would, I believe, be considerably below the cost of production, and it is therefore my opinion that under the present duties there is no possibility of an extension of a market for American flour in France.

This conclusion seems to be borne out by the insignificance of the importations of flour under the régime of the old duties, which were 35 cents less per 100 pounds upon the higher grades of flour than the existing duties. For the year 1892 the importations from all sources amounted to only 384,162 quintals, valued at $2,254,175, the importations of wheat for the same year being 17,255,819 quintals, valued at $73,901,081. The exportations of flour for the same period were $4,646,256, an amount more than double the importations. The recent increase of duties upon the higher grades of flour is double the increase upon wheat. Millers, therefore, have that much more protection than they had before, which increases the difficulties of would-be exporters of flour to this country.

Inhabitants of cities and villages in France purchase their bread, almost without exception, of the bakers. The rural population, however, have their wheat ground at the neighboring mill, generally a windmill, and make their bread at home. I have often eaten this bread, and, although wholesome, it is inferior to baker's bread.

Windmills exist everywhere in this part of France, and in construction vary from the most primitive forms built of wood to those of masonry of

modern forms. There is a small economy for the country people in making their bread, which is sufficient reason for their so doing, but there is another reason which influences a part of them. Many follow occupations in the towns, and rent a small house with a garden from a farmer or proprietor, agreeing during harvest time to give a certain number of days' work to the farmer, who pays him with grain. After the harvest is finished the renters upon the farm, in consideration of various services rendered, quite commonly have the privilege of gathering from the fields the heads of grain which the harvesters have neglected. One often sees whole families out in the fields gathering up the stray heads, their labor being rewarded by a sack or two of grain, which they take to the neighboring mill to be ground, and thus they obtain a supply of flour at a minimum outlay.

Inquiries made of leading grocers and bakers establish the fact that American flour is unknown in France outside of Paris.

STEPHEN H. ANGELL,
Commercial Agent.

ROUBAIX, *April 20, 1894.*

GERMANY.*

The only obstacle to the extension of the trade in American flour in Germany is the rate of duty imposed; but, as no discrimination is made against American flour, this obstacle applies equally to all countries. At the present rate of duty the Germans can afford to import only the highest quality of flour.

The American flour which can reach this market at the present rate of duty will be compared with, and will at all times be judged by, the highest and best standard. Germany occupies a peculiar position geographically toward the grain and flour producing countries of the world, and that position enables her merchants to command the best of everything.

As it may puzzle our exporters to understand how the Germans can import only the finest quality of flour with profit, the following facts should be borne in mind:

The class whose financial circumstances permit them to make a choice of bread eat with their morning coffee, tea, or chocolate certain forms of wheat bread, known as "Hornschen," "Knuppel," and "Milchbrodchen." All first-class hotels, restaurants, eating houses, and homes are supplied by the bakers with these particular forms of wheaten bread.

It is claimed on all sides that the best "Hornschen," "Knuppel," and "Milchbrodchen" can be made only from the "auszugmehl" or the extra quality of imported flour. It is claimed that the finest quality of flour made by German millers is not fine enough to produce the best quality of these particular forms of bread.

Those who eat the particular forms of bread made from the finest imported flour are, of course, called upon to pay a heavier price therefor; hence the flour that produces such bread can be introduced with profit. As these forms of bread do not concern the masses, the importation of foreign flour must depend upon the fancy of the people who can eat what they like.

The bulk of the people of Germany eat rye bread only. For them wheat bread has little attraction, and they have no appreciation of corn bread. Hot bread of any kind is unknown in Germany; therefore, corn bread can never find a place among the German people. Even if they took a fancy to corn bread, it would be useless to appeal to them to adopt it, as they are without the means to supply milk, eggs, etc., the vital ingredients of all good corn bread.

*Consular Agent Gädeke, of Kōnigsberg, reports that no American flour or wheat is imported into his district; that eastern Prussia produces more grain than it consumes, and exports its surplus to western Germany and to foreign countries; and that the imports of grain from Russia are reëxported to western Europe.

BAKERS' ASSOCIATIONS.

It may interest American millers to know that in every city of any importance in the German Empire there is a bakers' association, which controls everything in the bread-baking line. There are few homes in any city in Germany where bread in any form is baked; the bakers supply nearly every household. Therefore, the American millers must establish pleasant relations with the bakers' associations throughout Germany if they desire to extend their business.

IMPORTS OF GRAIN AND FLOUR.

The following statement shows the origin and quantity of grain and flour imported into Germany during the month of November, 1893, and the eleven months ending November 30, 1893, in quantities of 100 kilograms:

Quantity of grain and flour imported into Germany during November, 1893, and eleven months ending November 30, 1893.

Whence imported.	Month of November, 1893.	Eleven months ending November 30, 1893.
Wheat.	*100 kilos.*	*100 kilos.*
Belgium	4,797	58,476
Bulgaria	17,901	174,836
Denmark	46	2,068
Great Britain	.....	1,584
Netherlands	2,041	15,391
Austria-Hungary	27,256	220,206
Roumania	78,466	1,280,856
Russia	30,761	190,418
Servia	1,936	58,480
Turkey	.....	34,074
British East Indies	2,181	25,815
Argentine Republic	123,623	1,419,810
British North America	.....	32,268
Chile	4,611	35,482
United States	178,177	3,033,993
Australia	.....	2
All other countries	2,107	15,629
Total	473,803	6,599,323
Total for preceding year	432,254	12,625,581
Rye.		
Belgium	6,857	50,942
Bulgaria	4,279	189,643
Denmark	15	3,569
France	5,788	55,249
Netherlands	663	26,181
Austria-Hungary	37	3,823
Portugal	.....	158
Roumania	129,828	435,186
Russia	179,138	781,009
Servia	.....	23,754
Turkey	15,568	193,541
British North America	.....	2,151
United States	2,251	179,898
Total	344,424	1,945,600
Total for preceding year	127,652	5,303,185

Quantity of grain and flour imported into Germany during November, 1893, and eleven months ending November 30, 1893—Continued.

Whence imported.	Month of November, 1893.	Eleven months ending November 30, 1893.
Oats.	*100 kilos.*	*100 kilos.*
Bulgaria	1,285	10,882
Austria-Hungary	99,954	502,486
Roumania	249,252	569,642
Russia	6,849	83,270
Turkey	6,379	73,786
United States	108,682	384,397
All other countries	5,511	235,827
Total	561,512	1,860,219
Total for preceding year	96,779	791,504
Buckwheat.		
France	104	14,379
Netherlands	782	10,690
Russia	17,766	103,362
British North America	327	10,148
United States	735	43,784
All other countries	.....	1,058
Total	19,654	186,381
Total for preceding year	33,166	246,689
Barley.		
Belgium	5,029	14,026
Bulgaria	1,622	127,089
Denmark	9,853	39,871
France	502	3,535
Netherlands	1,306	27,094
Austria-Hungary	512,773	3,370,067
Roumania	291,757	1,549,218
Russia	243,295	2,321,693
Servia	.....	3,927
Turkey	1	14,506
United States	433	6,617
All other countries	1,754	8,916
Total	1,068,828	7,436,563
Total for preceding year	679,371	5,306,275
Maize and dari.		
Belgium	3,045	25,184
Bulgaria	70,286	397,278
Denmark	2	9,303
Netherlands	44	9,283
Austria-Hungary	22,616	228,390
Roumania	313,114	3,274,713
Russia	1,418	90,795
Servia	10,146	220,218
Turkey	13,659	225,304
Egypt	.....	2,683
United States	239,946	2,448,008
Argentine Republic	5,097	129,118
All other countries	13	16,218
Total	679,386	7,076,495
Total for preceding year	333,007	6,801,487

Quantity of grain and flour imported into Germany during November, 1893, and eleven months ending November 30, 1893—Continued.

Whence imported.	Month of November, 1893.	Eleven months ending November 30, 1893.
Flour.	*100 kilos.*	*100 kilos.*
Belgium	386	4,117
Austria-Hungary	25,587	191,697
Russia	23	4,352
Servia	496	805
United States	4,743	36,840
All other countries	682	4,527
Total	31,917	242,277
Total for preceding year	23,802	238,780

W. H. EDWARDS,
Consul-General.

BERLIN, *January 20, 1894.*

BAMBERG.

STANDARD OF LIVING.

The standard of living in my district is about equal to the average that prevails throughout Germany. While in the Empire in general, and especially in southern Germany, the amount of rye flour consumed is considerably in excess of wheat flour, the demand for American wheat exists, based upon the fact that the difference in price between local and American wheat is very small. However, experience has demonstrated the fact that our wheat is imported in larger quantities only when the Bavarian crop is small.

QUALITY OF FLOUR CONSUMED.

Rye flour and middle grades of wheat flour are the qualities most generally used. The local market has proved to be best adapted for that grade of our wheat known as "Red Winter No. 1." There is no demand for the cheaper grades, as it is impossible for them to compete with local wheat. The price ordinarily paid here for good wheat is from 15 to 16 marks per 100 kilograms ($3.57 to $3.81 per 220 pounds) net.

Among so-called fancy grades, Hungarian wheat has almost exclusive control of the market.

IMPORTS OF FLOUR AND WHEAT.

No American wheat flour whatever was imported during the years 1891–'93.

Exact figures are not obtainable regarding the import of American wheat during the years 1891 and 1892, but the quantities as reliably estimated were, respectively, 800 and 850 cwts. In 1893 the import was increased, (approximately 1,200 cwts.), owing to the local conditions prevailing, before stated, as necessary causes for the import of the foreign product.

During the same period the quantities of wheat flour imported from other countries are hardly worthy of mention.

In 1891 and 1892 very little foreign wheat came to this district. For the year ending June 30, 1893, the import approximated 80 to 90 carloads (20,000 cwts.), principally by northern Germany, consisting for the greater part of Russian and also Hungarian wheat.

EXCHANGE AND SHIPPING FACILITIES.

The monetary and shipping facilities are the same which are offered by other larger German inland towns.

OBSTACLES TO TRADE.

The principal obstacles in the way of the extension of trade in American flour are: The customary use of rye flour (which has become almost a national characteristic), the fact of there being a local wheat crop, and the inland location of the district.

TRADE OUTLOOK.

The prospects for doing a more extensive business in American flour depend at present upon the manner in which the Bavarian wheat crop itself is, or is not, able to supply the demand. However, it is my opinion that the prospective removal of duties on some articles exported from Germany to America will result, among other advantages, in a more liberal demand for American flour (in competition with Russian and Hungarian flour) throughout the German Empire, especially in the neighborhood surrounding my district.

LOUIS STERN,
Commercial Agent.

BAMBERG, *February 7, 1894.*

BARMEN.

The extension of markets for American wheat flour is the subject of a circular issued by the Department of State dated December 5, 1893, and to such questions as I am called on to make answer I beg to submit:

(1) The standard of living is good among the people of this consular district, and they are ready to eat American flour.

(2) Medium grades of wheat and rye flour.

(13) Bankers' exchanges.

(14) Ocean, river, and rail routes combined.

(15) No obstacles exist.

(16) Good.

H. F. MERRITT,
Consul.

BARMEN, *January 25, 1894.*

DUSSELDORF.

STANDARD OF LIVING.

In this consular district the standard of living is good as compared with the standard in some other portions of this Empire. I am of the opinion that if American provisions of every kind were industriously and intelligently pushed into the markets of Germany this district, as well as all others, would share in the mutual benefit accruing to producer and consumer by reason of extended markets and less costly, but better, food. The people here are ready to eat bread and kindred food prepared from American or any other kind of flour, if such flour is good. No one ever asks where the flour comes from. The question is, is the food good?

QUALITY OF FLOUR USED.

Good rye and wheat flour are the only kinds used so far as I have been able to ascertain.

EXCHANGE AND SHIPPING FACILITIES.

The exchange facilities are those which usually exist between commercial countries.

From any seaport in the United States flour can be sent to this place by water. A transfer of freight from ocean vessels to the boats which do a carrying trade on the River Rhine can be made at Rotterdam. From other seaports on the Continent flour could be sent here by water or by rail.

P. LIEBER,

DUSSELDORF, *January 29, 1894.* *Consul.*

FRANKFORT.

STANDARD OF LIVING.

The standard of living in this district is high in the cities, where the best of everything is required by the well-to-do people, who form a large proportion of the population; but in the smaller towns and villages, and especially among the farming and industrial classes, brown bread made of rye and the inferior grades of wheat flour is eaten almost exclusively, and all expenditures for food are regulated with the strictest economy. The people are ready to eat American flour when it conforms in quality to the standard grades of local origin and when it is as cheap and good as German flour of corresponding quality.

QUALITY OF FLOUR USED.

The flour used in this section is almost exclusively ground in this country, either from German wheat or a mixture of German with American or

other imported wheat. The several standard grades of wheat flour are designated 0, 1, 2, 3, 4, and 5, of which 0 represents the highest quality. Rye flour is of two grades—0 and 1.

Brand 0 of wheat flour is used for making French rolls, pastry, and the finest qualities of bread. Brand 1 is used for tea bread (*Wasserweck*) and as an admixture with rye flour for making the first quality of brown bread. Brand 3 is also used for mixing with rye flour to make the best quality of brown bread. Brand 4 of wheat flour is mixed with brand 1 of rye flour to make the second quality of brown bread. Brand 5 of wheat flour is used as food for animals when grain is plenty and prices low; but when prices are high and times hard this lowest grade of flour is used in admixture with brand 1 of rye meal for making the coarse black bread, which is the staff of life to the German peasant and laborer.

Roller mills are in general use throughout southern and western Germany, and the production of brands 3 and 4 are relatively small—not enough in ordinary times to meet the demands of the market, which usually requires a larger proportion of the lower than the higher grades. It follows, therefore, that brands 3 and 4 are the qualities for which the import demand is often greatest, though for reasons to be hereinafter stated this is not the case at present. In years of profuse harvests northern Germany raises sufficient wheat to supply its own needs and sells its surplus to southern Germany; but in years of short crops, like the present, the deficit in the south and west is largely met by direct importations of wheat through Amsterdam, Rotterdam, and Antwerp, whence it comes up the Rhine in barges to Frankfort, Mayence, and Mannheim, which latter city, being the head of practical navigation on the river, is the controlling grain mart for a large district.

AMERICAN FLOUR IN GERMANY.

There are absolutely no statistics or records from which the quantity of American flour imported into the consular district of Frankfort during any specified year or period can be even approximately estimated. A consular district is a purely arbitrary division of territory, and separate statistics of import and export are not kept even by the governments of the several states which collectively form the German Empire. The statistics of the boards of trade at Frankfort and other principal cities show the amounts of wheat and flour received at and shipped from those points, but take no account of its origin, whether native or foreign. Thus the total arrivals of wheat at Frankfort by rail and river were 50,296 tons in 1891 and 52,326 tons in 1889, but there is no way by which it may now be ascertained what proportion of all this was imported or from what country it originally came. Statistics of imports which show the origin of the merchandise are kept only by the customs authorities and are collated by the imperial bureau of statistics at Berlin for the whole of Germany. Taking, therefore, the only official records which exist, we find that the imports of American flour into Germany during the past three years have been: In 1891, 436,770 pounds; in 1892 (estimated),

4,493,170 pounds; and in 1893, 9,231,860 pounds. The import of American flour, although still small in comparison with that of American wheat, is steadily increasing.

AMERICAN WHEAT IN GERMANY.

The quantity of American wheat imported into Germany during the same period was: In 1890, 51,988 metric tons; in 1891, 143,539 tons; in 1892, 630,213 tons; during the first ten months of 1893, 285,581 tons.

OTHER FOREIGN FLOUR IN GERMANY.

The wheat flour imported into Germany from countries other than the United States amounted in 1891 to 13,947.5 tons; in 1892, 26,620.2 tons; and during the first ten months of 1893, 17,826.3 tons.

GERMAN WHEAT IMPORTS.

The total German importations of wheat from all countries during the four years under consideration were as follows, the unit of weight being the metric ton of 1,000 kilograms (equal to 2,240 American pounds):

Countries.	1890.	1891.	1892.	1893 (10 months).
	Tons.	*Tons.*	*Tons.*	*Tons.*
Russia	370,823	515,863	257,294	15,965
Belgium	18,523	37,716	25,016	5,367
Bulgaria	.....	1,176	53,472	15,693
France	4,774	.....	.....	.....
Denmark	3,305	971	4,497	202
Netherlands	21,041	27,739	8,620	1,335
Austria-Hungary	111,183	75,117	45,673	19,295
Roumania	61,800	42,852	91,785	120,239
Servia	.....	6,630	13,539	5,564
Switzerland	2,725	.....	.....	.....
Turkey	.....	.....	.....	3,047
British India	.....	24,107	50,908	2,364
Argentine Republic	.....	12,396	66,169	129,628
Chile	.....	7,462	13,043	3,087
British America	.....	1,268	11,719	3,226
Other countries	241,790	.....	.....	.....
Total	835,964	753,297	641,738	325,452
United States	51,988	143,539	630,213	285,581
Grand total	887,952	896,836	1,271,951	611,033

GERMAN DUTY ON AMERICAN FLOUR AND WHEAT.

Prior to the 1st of February, 1892, the duty on American wheat flour imported into Germany was at the standard rate of 10.50 marks per 100 kilograms (equivalent to $2.50 per 224 pounds), and the duty on American wheat was 5 marks per 100 kilograms ($1.19 per 224 pounds). But under the commercial treaty between the United States and Germany, which was concluded on the 30th of January, 1892, and took effect two days later, a long list of American products, including wheat and flour, were granted admission at the lowest rates of duty which are conceded to the "most-favored

nations." Since that date the duty on American wheat and rye flour imported into Germany has been 7.50 marks per 100 kilograms ($1.78 per 224 pounds).

The present import duty on American wheat is 83 cents per 224 pounds, or $8.33 per metric ton of 2,240 pounds, equal to about 22.8 cents per bushel.

GERMAN DUTY ON FLOUR AND WHEAT NOT AMERICAN.

As to the duty on flour from other countries when imported into Germany there are three schedules, as follows:

(1) The lowest, $1.78 per 224 pounds, which is conceded to the most-favored nations, which are, besides the United States, the Argentine Republic, Belgium, Chile, Costa Rica, France, Great Britain, Hawaiian Islands, Italy, Liberia, Mexico, Netherlands, Austria-Hungary, Persia, Portugal, Roumania, Switzerland, Servia, Spain, Denmark, Greece, Sweden and Norway, Korea, Turkey, Dominican Republic, South African Republic, Zanzibar, Honduras, Kongo Free State, Canada, Guatemala, and Paraguay. All these most-favored nations enjoy their special privileges under commercial treaties which have been in many cases adopted for a specified number of years, and are therefore liable to be discontinued when they expire by limitation. There is at present in German politics a strong agrarian party which is opposed to such treaties, in so far as they apply to agricultural products; but, despite this influence, the treaties with Roumania and Spain have been recently renewed, with certain modifications. Only four of the nations in the most-favored class—Austria-Hungary, Roumania, Bulgaria, and the Argentine Republic—have any considerable export of cereals to Germany which competes seriously with the heavy imports from the United States.

(2) Brazil, Russia, and other countries not belonging to the most-favored class are subject to the standard duty of 10.50 marks ($2.50) per 224 pounds on flour when imported into Germany.

(3) Since the outbreak of the tariff war between Germany and Russia on the 1st of August, 1893, the duty on flour from the latter country has been increased 50 per cent, and is now 15.75 marks ($3.75) per 224 pounds.

The import duty on wheat from all nations in the most-favored class, including the United States, is 83.3 cents per 224 pounds; $1.19 per 224 pounds from all other countries, except Russia. It is $1.78 per 224 pounds when imported from Russia.

EXCHANGE FACILITIES.

The facilities for banking and exchange are as good in Frankfort as in any city of continental Europe. There are about two hundred banks in this city, of which all the principal ones have direct relations with New York and other leading American cities.

SHIPPING FACILITIES.

The facilities for shipping from American ports to Frankfort, Mayence, Mannheim, and Cologne are ample and excellent. There are regular lines of mail and freight steamers between Rotterdam, Amsterdam, and Antwerp and New York, Baltimore, and New Orleans. Sailing vessels also bring cargoes of wheat, though most of the business is done by steamers. The ordinary transit for freight coming by steamer from New York via Rotterdam to the Upper Rhine ports occupies from four to five weeks, the time varying somewhat with the existing stage of water in the river. With a fair stage of water the transshipment from steamer to river boat at Rotterdam and the trip to Frankfort or Mannheim occupy about three weeks. If the water is low and lighters have to be used, one week longer must be reckoned for the river route.

The rates of freight on the Rhine are also quite variable and are governed by the season, the stage of water, and the demand for vessels. The average rate for wheat is about $1.66 per last of 2 metric tons, or 4,480 pounds, and for flour 10 cents per bag of 100 kilograms (224 pounds) from Rotterdam to Mannheim, the rate to Frankfort being about 10 per cent higher than these figures. Transshipment from ship to river boat at Rotterdam costs about 25 cents per ton and insurance during river transit three-eighths to one-half of one per cent. The rates of freight from Antwerp and Amsterdam via the Rhine to Frankfort and Mannheim are from 25 to 50 cents per last higher than those above given from Rotterdam, which is the direct and natural entrepôt at the mouth of the river.

Owing to the protracted drought of last spring and summer, the present stage of water in the Rhine is low for this season of the year, and the freight rate on wheat from Rotterdam to Mannheim is now $2.38 per last, and $2.61 to Frankfort; but this will doubtless be reduced in February to $1.66 and $1.90, respectively. During the high water of March and April such freights are often as low as $1.20 and $1.25 per last. In general, the rate for flour may be reckoned at 25 cents per ton higher than that for wheat, for the apparent reason that flour is usually shipped only in small quantities, while vessels often bring entire cargoes of wheat in bulk.

TRADE OBSTACLES.

The principal obstacles which stand in the way of an important and permanent increase in the imports of American flour to this section of Germany may be summarized as follows:

(1) The import duty, which is relatively higher on flour than on wheat and favors to that extent the importation of the latter.

(2) The fact that bran, middlings, and the lower qualities of flour produced by the final grindings are always in strong demand, the two former as food for animals and the latter for making cheap brown bread. It is therefore more advantageous to import and grind wheat than to import flour for the local markets.

(3) The fact that German millers make the several grades or qualities of flour required by consumers more exactly than they can be imported. In 1892 there was a considerable import of American flour through certain commission houses in this region, but some of these shipments came from produce exchanges in the United States, and, being made up of the products of several different mills, were found to be variable in quality, two consecutive bags of the same lot being often quite different in grade. This caused complaints from dealers and bakers and injured somewhat the reputation of American flour. A leading commission merchant who suffered from this experience states that in future German importers will prefer to deal directly with millers in the United States, who can guaranty and preserve uniformity of quality.

(4) An obstacle to the importation of American flour is the fact that the high grades which are used in this country for rolls, pastry, and fine bread have long been imported to a greater or less extent from Hungary, and have therefore an established reputation. Southeastern Germany is largely supplied by such imports from Hungary; but, on account of high railway freights, American wheat and flour are at present cheaper for the whole Rhine Valley than Hungarian, and, as a matter of fact, the warehouses of this region are already stored with American wheat.

OUTLOOK FOR AMERICAN TRADE.

From the foregoing and all other trustworthy information that can be obtained, it would appear that, though under the conditions which now exist—cheap wheat and flour in America and a large deficit in Europe—the export of American flour to Germany may be considerably increased during the present season, the consensus of expert opinion is that such increase is likely to be to a great extent incidental and temporary.

Among the reasons which are assigned for this opinion is the fact that in Germany the scientific economy of all food products has been exhaustively studied, and the exact proportions of starch, gluten, and other elements which are required for the most advantageous bread-making have been precisely defined. Both dealers and bakers assert that American flour, which is usually made from one kind of wheat, is too "hard"—whatever that may mean—and does not bake well; and it is their opinion that such flour can not permanently compete with with German-made flour ground from a mixture of equal parts of German, American ("Kansas" or "Red Winter"), La Plata, and Russian or Roumanian wheat. Out of this standard mixture the German millers grind all the successive brands from 0 to 5, and on the grades thus produced the local standards of quality are based. This fastidiousness in respect to quality may be largely due to prejudice or selfish commercial interest, but the important fact is that these notions exist and must be taken into account as one of the chief obstacles to be met in the introduction on a large scale of American flour in Germany.

It should also be borne in mind that during the past five or six years great improvements have been made in the milling facilities of this country.

New mills have been built and old ones enlarged and equipped with automatic roller machinery and with screening and bolting apparatus of the most modern and highly improved types. As a consequence, the cost of milling has been greatly reduced. Grinding, which five years ago cost 40 cents per 100 kilograms, can now be done at a profit in some of the larger mills for 12 cents per 100 kilograms. Labor of all kinds is very cheap, and the German miller, though fully alive to the merits of American wheat, has become a hard man to beat on his own ground.

The conclusion is that, in respect to American wheat, the export trade to Germany is fully established, and as long as present prices continue will take care of itself.

The demand for American flour, although restricted by the circumstances above described, may be undoubtedly stimulated by enterprise and good management, and the coming six months would seem to offer an unusual opportunity for such an effort. The trade can be best worked through responsible commission merchants, of whom there are several in each of the principal cities of this region. The conditions upon which such consignments would be received are substantially the following, which have been found to work satisfactorily in the import of American wheat, it being remembered, however, that in importing flour the German merchants will prefer to deal directly with American mill-owners who export their own products.

STIPULATIONS.

Price in marks per 1,000 kilograms, including freight and insurance to port of destination named.

Reduction of weights on basis of 50¾ kilograms, equal to 112 pounds English.

Outturn guarantied in full.

Short weight must be claimed within a fortnight after the vessel has been discharged, and, if requested, a sworn weigher's certificate to be furnished.

Quantity to be within 5 per cent at seller's option, and the unit to be 480 pounds English.

Policy of insurance to be given for 2 per cent over invoice amount.

Shipment to be made by steamer or steamers, with option to call at any intermediate port or ports.

Port of shipment, New York, Baltimore, Newport News, or Philadelphia.

Official seaboard or western certificate to be final as regards quality and condition. An affidavit should be furnished only if the quantity of the western certificate exceeds the quantity shipped under this contract.

Payment to be made by seller's check at sight direct on buyers, with documents attached, less 5 per cent discount for sixty days.

Arbitration of any dispute to be held at London, according to the rules established for the American grain-shipping business, excepting where such rules conflict with the foregoing stipulations of this contract.

Finally, it is worthy of note that there is throughout southern Germany a general scarcity of food grains for cattle, horses, and sheep, and this, added to the lack and high prices of hay and straw caused by the drought of the past year, has already produced a demand for the import of bran and shorts, as well as oats and corn. If bran can be compressed so as to save bulk on shipboard, and can in that state be exported and arrive sweet and in good condition, a large export to this country can certainly be developed during the coming six months. The practice of feeding stock of all kinds with bran and middlings, usually mixed with chopped hay or straw, is very general in Germany, and it is this which makes the demand for such products so constant and so profitable to German millers.

FRANK H. MASON,
Consul-General.

FRANKFORT, *January 4, 1894.*

GRAND DUCHY OF LUXEMBURG.

IMPORTS OF FLOUR AND WHEAT.

No American flour is imported into the Grand Duchy of Luxemburg, owing to the high import duty. For the same reason very little foreign flour of any sort is used.

As Luxemburg, though it is an independent country, is a member of the German customs union, considerable quantities of flour are imported free of duty from Dantzic, Königsberg, and other places in northern Germany. The flour most used in Luxemburg is manufactured here from a mixture of domestic and Danubian or American grain.

The entire quantity of wheat flour imported was:

From—	1891.	1892.
Belgium.....tons...	23	18
Austria.....pounds...	.....	436
France.....do.....	.....	1,111

During 1891 no American wheat was imported. In 1892 the importations of American wheat amounted to about 348 tons, and in 1893 to about 2,420 tons. The imports of wheat other than American were as follows:

Kinds.	1891.	1892.
	Tons.	*Tons.*
Belgian	2,551	8,692
French	19	.....
Roumanian	.....	788
Servian	.....	33
Russian	.....	388
Chilean	.....	11
Egyptian	.....	133

EXCHANGE FACILITIES.

The facilities for monetary exchange depend, necessarily, in a general way upon the fluctuating conditions of the market. The International Bank, in the city of Luxemburg, is an extensive and reliable concern. There are also several other banking establishments in the Grand Duchy.

AMERICAN WHEAT.

While in most of the other states which are members of the German customs union the chief bread flour is rye, in the Grand Duchy of Luxemburg nearly all bread consists wholly or chiefly of wheat flour. It therefore appears that no part of the German customs territory offers a better market for American wheat than does the Grand Duchy of Luxemburg. Naturally, though, the capacity of this market is not large, as the Grand Duchy has only 215,000 inhabitants.

The increased importation of American wheat during the past three years is very encouraging, and the unusually friendly feeling toward our country which permeates all classes here seems to justify the belief that the commercial relations now existing between the United States and the Grand Duchy of Luxemburg can and will be considerably extended in the near future.

SHIPPING FACILITIES.

The facilities for shipping are very good, there being direct railway connection with Antwerp, between which port and New York the steamers of the Red Star line ply semiweekly. There are also several sailing every month from Philadelphia to Antwerp.

The high German duty apparently renders impossible the importation of American flour into the Grand Duchy of Luxemburg, but there seems to be room in Luxemburg mills for American wheat.

GEORGE H. MURPHY,
Vice-Commercial Agent.

LUXEMBURG, *January 20, 1894.*

GLAUCHAU.

STANDARD OF LIVING.

In the consular district of Glauchau, Saxony, and the neighboring cities and villages there is a large element of factory hands, weavers, miners, etc., whose standard of living is best expressed as fair.

AN OPENING FOR AMERICAN WHEAT AND FLOUR.

To this class of people the cheaper brands of flour must be supplied. Among the better classes the bread most used is made from a brand of wheat flour called "Kaiserauszug," which is of superior quality. The poorer classes, comprising the factory hands, weavers, and others, use very little wheat flour, but employ the cheaper kinds of grain—corn and oats. Here

would seem to be an opportunity to introduce a cheap brand of American wheat flour that would meet the requirements of the laboring people and come within their ability to purchase.

The forwarding agents state that little or no grain is imported into this district from the United States, the sources of supply being Russia, Hungary, and Roumania, from which it is imported direct by rail. The cost of transportation is small.

That American wheat is not handled in this district is due to the fact that it has never been properly introduced, and not from any unwillingness to receive it.

Considering that there is a population of about 300,000 in this district, of which the majority are working people, the introduction of a cheap brand of American wheat flour could be readily effected and a market created for our exportations, with promise of extensive trade in American grain and flour in the future.

SHIPPING FACILITIES.

Hamburg and Bremen, the seaports of this district, are in almost direct communication via Leipsic. The facilities for transportation by rail are of the best. The facilities, also, for shipping from the United States to these seaports put this district in easy reach of the grain trade.

EXCHANGE FACILITIES.

The facilities for monetary exchange being also very good, render the prospects of doing a large business, as far as transportation is concerned, very promising.

OBSTACLES TO TRADE.

There are obstacles in the way, however, in the rate of ocean freight and the competition with Russia and Bohemia. The Russian grain trade in this country is already extensive, and, should the Russo-German commercial treaty be concluded, Russia will continue to supply a large portion of the demands.

The grain trade here is handled principally by wholesale firms, and if our wheat could be introduced to these purveyors and handled by them it would find the people ready to become consumers. At present, owing to the extensive trade in Russian wheat, the ready market would be difficult to acquire; but if American wheat can be transported at a cost to rival the Russian and Austrian importation, American products ought not to suffer in the competition. The question has now somewhat of a political aspect, the outcome depending on the rejection or conclusion of the commercial treaty with Russia, which is supported by the commercial policy of the Government, but strongly opposed by the Agrarian League, representing the agricultural interest of the Empire. Should this treaty be rejected, our grain and flour will not have so much to contend with in acquiring a market.

GEORGE SAWTER,

GLAUCHAU, *January 6, 1894.* *Commercial Agent.*

HANOVER.

So far as regards the mere letter of the circular, I might content myself with the bare statement that, until there is a decided modification of the German tariff, there is in this market no chance for American wheat flour as distinguished from the grain. The duty on 100 kilograms (220.5 pounds) of flour is 7.30 marks ($1.74), while that on the same weight of wheat is only 3.50 marks (83 cents).

It may be worth while, however, to add that the German millers often buy American wheat to mix with the home product in proportions running up to 50 per cent, with a view to making a lighter bread. For some reason yeast is more active in flour made from American wheat. Bakers want bulk, and their customers do not object to it, for to them it is lightness.

It might be well to inquire whether there is not an opening for American trade in rye, especially if the present negotiations between Germany and Russia relative to tariff reprisals prove unfruitful. Upon this point I have no information that will warrant more than a suggestion.

E. P. CRANE,
Consul.

HANOVER, *January 4, 1894.*

MAGDEBURG.

STANDARD OF LIVING.

The province of Saxony being probably the richest province in Prussia, the standard of living in my district is advanced. The farmers are well to do, and laborers find steady employment. The people are ready to consume American flour.

QUALITY OF FLOUR USED.

The flour most used in this district is, of course, rye flour. Of wheat flour a middling quality is favored made entirely of German wheat. To produce a finer quality a brand called "Kaiserauszugsmehl" (German wheat) is mixed with American Red Winter No. 2, or other suitable wheat, mostly Russian, in the proportion of one-sixth to one-third American or Russian and the remainder German. This latter brand, it is claimed, equals our patent wheat flour and answers all purposes for home consumption, and is from 3 to 4 marks (71.4 to 94.2 cents) cheaper per 100 kilograms (220 pounds) than the American product. For extraordinarily fine wares bakers use a flour made in Austria. German wheat makes as white a flour as our wheat, but it does not contain so much gluten. To supplement this gluten in the finer qualities our wheat is preferred to Russian.

IMPORTS OF FLOUR AND WHEAT.

The quantity of American wheat flour imported into this district is only nominal. In 1893 it may have been about 2,000 bags and in the preceding years certainly not more.

In spite of diligent inquiries at the chamber of commerce, prominent dealers, and shipping houses, I have been unable to ascertain even approximate data in reference to the quantity of wheat imported into my district during 1891, 1892, and 1893. No statistics are kept in Magdeburg of incoming and outgoing merchandise, and I could not find anybody who would undertake to make an estimate.

The quantity of wheat flour imported from other countries into my district during 1891, 1892, and 1893 was nominal also.

EXCHANGE AND SHIPPING FACILITIES.

This being a large farming, mercantile, and manufacturing community, the facilities for monetary exchange are all that can be desired.

The facilities for shipping from the United States are the best possible. The goods can be loaded at Hamburg from the ocean steamers directly into barges and tugged up the River Elbe, which flows through the province of Saxony.

OBSTACLES TO TRADE.

The obstacles in the way of the extension of trade in American wheat flour are twofold—first, the preference of the population for rye, and, second, the price of the wheat flour. No fault is found with the flour itself. Against the preference it is impossible to fight. The German laborer, farmer, and even the better classes prefer rye bread to wheat bread, even when the latter is cheaper, as it was in 1891.

The price of our flour, or rather the duty on the same, is the second great obstacle. While the duty on our wheat under the favored-nation clause is 3.50 marks per 100 kilograms (83 cents per 220 pounds) the duty on flour is 7.30 marks ($1.74), thus discriminating against the manufactured article in favor of the raw.

I have been credibly informed, however, that a second quality of our wheat flour could be readily disposed of at the seaports, principally Hamburg and Bremen, not for German consumption, but for supplying outgoing ships. This flour could be stored in the Freihafen district, thus escaping taxation, and taken out for export when needed. This market should be in our hands.

The prospects of doing a more extensive business inland are, from my observations, not very bright. As before mentioned, the Germans do not as a rule appreciate a fine, high-grade, patent wheat flour, and the duty is against us. Other nations are, of course, similarly situated, and it is therefore not a matter of foreign competition.

There are two matters now under consideration by the German Government—the commercial treaty with Russia and the abolition of the proof of

identity (*Identitaets-Nachweis*)—which, if passed, might bear on our exports.

Wheat, when once imported, can not be exported again and the duty remitted, unless the identity of the imported and exported grain is proven. This, in an article such as wheat, is very difficult and generally impossible to do; hence the actual working of the clause has been that wheat, when once imported, remained here for consumption, and, when followed by abundant domestic crops, glutted the market and depressed prices to the disadvantage of the farmer and the dealer. With the flour the identity clause was partly inoperative. A mill working both foreign and domestic wheat had the privilege of exporting or selling for export about 60 per cent of flour made from the imported quantity and was remitted a corresponding amount of the duty paid, without, however, being obliged to prove that the flour to be exported was made solely, or even partly, from the imported article. In other words, they could export flour made entirely of German wheat and collect a drawback from the Government if they proved that a corresponding amount of imported grain had gone into their mill.

The abolition of this identity clause, which is at present only intended for the grain, will no doubt stimulate imports in cereals, because the dealers need not fear being handicapped by an accumulation in the markets, but can in such case export again to other places any part of their imports and collect a drawback on the same from the Government. It is claimed by men in the business that after the abolition of the identity clause as to grain has demonstrated its usefulness its scope would naturally be extended to flour also.

JULIUS MUTH,

MAGDEBURG, *January 27, 1894.* *Consul.*

MANNHEIM.

Wheat flour is generally used in Baden, especially in this district. The people are inclined to eat American wheat flour.

A good middle quality of flour is most in use.

The quantity of American wheat flour imported into this district during the three years ending June 30, 1893, was:

	Kilograms.
1891	700,000
1892	1,000,000
1893	600,000

The quantity of American wheat imported during the same period was:

	Kilograms.
1891	100,000,000
1892	100,000,000
1893	115,000,000

Besides American wheat flour, only very small quantities of foreign flour have been used during the years 1891, 1892, and 1893—about 100,000 kilograms altogether, which came from Hungary.

The quantity of wheat imported from countries other than the United States during the same period was:

	Kilograms.
1891	100,000,000
1892	100,000,000
1893	115,000,000

This came from La Plata, Roumania, Servia, Bulgaria, India, Turkey, and Russia.

The manner of buying and paying is either sixty days' bank credit or cash.

The shipping facilities are very good. The goods can be shipped from the United States to Rotterdam or Antwerp, and thence on the Rhine to this city.

MAX GOLDFINGER,

MANNHEIM, *January 13, 1894.* *Consul.*

MAYENCE.

STANDARD OF LIVING.

The standard of living in this consular district is, on the whole, fair to high. The people live well—as well, I believe, as anywhere in Germany. They can not be said to be ready to buy American flour, though consuming, no doubt, a good quantity of flour from American wheat ground in Germany. They are not opposed to American wheat flour as American, but will eat it as quickly as any other if they can get it as good and as cheap.

QUALITY OF FLOUR CONSUMED.

The quality of wheat flour used in Germany by the well to do is claimed to be superior to the American article; but there is a great deal of bread of mixed flours eaten by all classes, especially by the middle and lower orders of the people, made up of rye flour mixed with wheat flour of low grade. Rye is the staple breadstuff in Germany, though wheat is coming more and more into popular favor, particularly in combination with rye. In southern Germany rye bread is now, I understand, seldom met with unmixed, some wheat flour being as a rule added. But the people, I am inclined to think, will not be swerved from their loyalty to rye for many generations, except through bad harvests in Russia, which is the great rye granary for Germany, or through tariff wars with that Empire, making this cereal high in price. They are remarkably strong in their attachment to rye bread, and condemn wheat as a steady diet. They will eat rye bread in preference to wheat bread even when they can get the latter as easily as the former.

The quality of wheat flour most in use is ordinary.

AMERICAN FLOUR AND WHEAT.

I do not believe, as the result of the inquiries I have made, that any American wheat flour is imported into this consular district or has been in

the years mentioned. In all Germany the total amount of "flour from grain, etc.," imported from the United States during the year 1892 seems, according to the statistics of the country, to have been only 2,904,000 pounds, or about one-twentieth of a pound to each head of the population. With even these small figures, however, the United States are excelled in flours exported to Germany by only one country—Austria-Hungary, which shipped to Germany in the year under consideration 49,579,200 pounds of flour of all kinds, or about seventeen times as much as the United States.

What amount of wheat was imported into this district during the years in question, I can not say. It was, however, considerable. From the custom-house here I have been unable to get figures, as it responds to my request for them that they are in the hands of the officials at Berlin. The statistics of the Empire for 1892 show 630,213 tons (2,200 pounds to the ton) of wheat imported into Germany direct from the United States during that year, or more than from any other single country; and 1,296,213 tons altogether, thus making the United States the contributor of a trifle less than one-half of the aggregate importation. More than one-half, however, no doubt came from the United States. Reckoning 2,200 pounds to the German ton and 60 pounds to the bushel of wheat, the quantity of wheat acknowledged to have come from the United States in 1892 was 23,107,810 bushels, and the quantity from all countries 47,527,810 bushels.

I doubt whether any American wheat flour at all was imported into this district during the years named.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are as good as they are anywhere. The facilities for shipping from the United States to Mayence are good—to Antwerp or Rotterdam by vessel and thence by iron barges up the Rhine.

OBSTACLES TO TRADE.

The obstacles in the way of the extension of trade in American flour in Germany are the customs duty and the belief that the high grades of American flour are inferior in quality to the corresponding grades of Germany. The Germans consider their best wheat flour superior to the American, but inferior to that of Austria-Hungary; and, as the flour of Austria-Hungary is largely shut out of the German market by the German duty, there is little show for the American. It seems to be thought, however, that the lower grades of American flour might go with a little pushing.

One objection made to American flour is that it is shipped in barrels, against which there is a prejudice. I believe flour is never barreled in Germany.

A German miller in this district, who some fifteen or twenty years ago worked at milling in Chicago, maintains that German wheat flour is superior to American, because the millers in Germany make less fine flour out of the same quantity of wheat, as the low grades of flour in Germany can be more

readily disposed of for mixing with rye in bread-making. There being little rye bread eaten in America, the manufacturers of wheat flour there are of necessity obliged to make more fine flour out of a given quantity of wheat, thus lowering the general quality of their output as a food. The mode of milling in Germany is different from that in vogue in America. It was formerly very inferior to that prevailing in England and the United States, but in the last twenty years or so great improvements have taken place in milling machinery and in the method of milling. The small mills run by wind or water have been supplanted to a considerable extent by large mills worked by steam. What is known as high milling rules in Germany, while flat milling is said to characterize the United States; and they differ, I am told, in this, that the German seeks quality rather than quantity, while the American aims at quantity. In Germany the wheat is ground coarsely at first, three or four times, into groats or grits, from which every particle of bran is cleaned away by machinery, and then is ground into flour by porcelain rollers. The first or best grade of flour is marked Imperial, the second No. oo, the third No. o, the fourth No. I, and the fifth No. II, the two grades last named being generally used for mixing with rye flour in bread-making. In southern Germany the best grade of flour is generally marked No. o, the second No. I, the third No. II, etc. In Germany only 12 per cent of the whole output is of the best grade, 25 per cent of it is of the second, and 20 per cent of the third. The wheat used in Germany and the United States is of like quality, and immense quantities of American wheat are ground up into flour in Germany, so much so that the Germans want to know what it would profit them to import American flour when they can import the wheat itself and grind it up to their liking.

The miller to whom I have referred says that there is no obstacle, in his opinion, in the way of the introduction and sale of American wheat flour in Germany except the inferiority of the flour itself. If the American flouring mills will compete in Germany with as good a product as the German mills turn out, they can find a market.

The German mills are for the most part small, and there are a multitude of them, I believe, run by three or four hands each. Such extensive establishments as are met with in the United States are unknown here, and there seem to be no generally recognized brands of flour, as in the United States. When you want flour you have to buy it blind and ask your grocer or local miller for his best article, which seems not to be always the same thing. The American housewife in Germany does not like the German flour, and thinks it quite inferior to the American flour for fine baking. It may be that the German flour is more nutritious, but it does not make up as well.

I know of no large mills in my district.

TRADE OUTLOOK.

The prospects at present for doing business in American flour in Germany I consider poor for the reasons above cited.

In conclusion, I have to say that I have been writing on hearsay, and not as an expert; and the statements I have made may not be strictly correct. The trade in the United States, however, will be able to judge from the general tenor of the report whether the statements made as to the flours of the two countries are probably true or not.

JAMES H. SMITH,
Commercial Agent.

MAYENCE, *January 27, 1894.*

MUNICH.

QUALITY OF FLOUR CONSUMED.

Of breadstuffs, wheat flour is the most used in this district. Formerly rye bread formed the great bulk of that consumed; but the difference in price between rye flour and the inferior grades of wheat flour being small, the latter appears to be preferred and is more extensively used, at least in this immediate section.

There is no objection to American wheat flour, provided it can compete in price with that obtained here and with that imported from neighboring countries.

Wheat flour is roughly classed as 0, 1, and 2, the last, an inferior quality, being that most used.

AMERICAN FLOUR AND WHEAT.

I can learn of no American wheat flour having been imported here during the years 1891, 1892, or 1893, and it is very probable that if any was imported the amount was small.

In giving the amount of wheat and wheat flour imported from other countries into this district, it must not be inferred that these amounts are consumed here; on the contrary, this section, being largely devoted to agriculture, produces nearly enough wheat for its own need, and wheat and wheat flour, almost to the extent imported, is distributed over the Empire. I give in the following statement the amount of wheat and wheat flour imported into Oberbayern, Schwaben, and Newberg during 1892, that being at this date the only year for which I can obtain accurate information:

	Bushels.
Austria-Hungary	183,029.36
Servia and Roumania	414,110.76
Russia	14,681.33
America	366.66

The quantity of wheat flour imported in 1892 was 1,694,000 pounds, from Austria-Hungary.

I regret that I can obtain only partial information of the amount imported by Niderbayern during the same year. There arrived in Passau, via the Danube, 15,276 tons of imported wheat and 1,491 tons of flour. It is

probable that the great bulk of this came from Austria-Hungary, Servia, and Roumania, and that as much more was received by railroad from the same countries.

FACILITIES FOR EXCHANGE.

Munich being an important capital of fully 380,000 inhabitants, the facilities for monetary exchange are good.

OBSTACLES TO TRADE.

In considering the question of profitably importing American wheat and American wheat flour directly into this district, it should be remembered that this is an agricultural section and annually produces a large amount of wheat; that this district adjoins Austria-Hungary, one of the best wheat-producing countries in Europe; and that Munich is far inland, remote from the ports of Bremen and Hamburg, and connected with these distant cities only by rail. The freight rate between Munich and Bremen in lots of 10,000 kilograms is 4.66 marks ($1.11) per 100 kilograms (220 pounds).

RALPH STEINER,
Consul.

MUNICH, *January 25, 1894.*

NUREMBERG.

STANDARD OF LIVING.

The principal food in the Kingdom of Bavaria is bread, and, of the cereals cultivated for this purpose, rye stands foremost; next to it comes wheat. Especially in Lower and Upper Bavaria, two of the most fertile provinces of the eight of this Kingdom, a large quantity of wheat is grown.

The official statistics of Bavaria show that of the twelve years 1880–'92 it was the year 1892 which had the best crop, whereas the year 1888 had the poorest, both in quantity and quality. In 1892 wheat yielded 32.3 zentners* of grain per hectare;† in 1888 it yielded 24.7 zentners.

The crop area of wheat varies but little. In 1892 it was 322,452 hectares; in 1891, 324,437 hectares. In 1892 the wheat crop yielded 10,411,878 zentners of cleaned grain; in 1891, 8,070,105 zentners.

In the year 1892 the average weight of a hectoliter (2 bushels 3.35 pecks) of cleaned wheat was 152 pounds (167.2 pounds American); in the year 1891 it was 149 pounds (163.9 pounds American).

The 1893 crop may likewise be called a good one. Although during the summer the prospects, owing to the prolonged and excessive heat, were very bad, yet the more favorable weather of the autumn brought a good harvest.

Bavaria's production of wheat is, however, not sufficient for its own wants, and it has therefore to turn to other countries to meet the deficiency.

*1 zentner=110 American pounds. †1 hectare=2.469 acres.

This is mainly effected by the importation of wheat and wheat flour from Austria-Hungary and Roumania, and, of late, the La Plata.

ARE THE PEOPLE READY TO EAT AMERICAN FLOUR.

There has been an inclination to use American wheat flour. I am informed that various efforts to introduce it in Bavaria were made previous to the year 1881. However, these efforts met with no success, the quality, as well as the manner of grinding, of the American flour not answering the requirements of the Bavarian bakers, who, accustomed to the different qualities of Bavarian and Hungarian flour, could not get on with the American product in their method of baking.

In the year 1881 the import duty on flour was raised to 3 marks per 100 kilograms (71 cents per 220 American pounds), which put great difficulties in the way of importing this article; but the fresh increase of the duty to 7.50 marks per 100 kilograms in 1885 and to 10.50 marks in 1887 practically put a stop to it.

QUANTITY OF AMERICAN WHEAT FLOUR AND WHEAT IMPORTED.

The aforementioned duty of 10.50 marks is still in force, and, although it has been reduced since 1892 to 7.30 marks per 100 kilograms on American flour ($1.74 per 220 American pounds)—the United States, as one of the most-favored nations, enjoying the privilege of a reduction on the general tariff—yet it is hardly probable that American wheat flour has been imported from July 1, 1890 (or even, as far as I have been able to learn, since 1881) up to the present time.

American wheat has been and is still imported in considerable quantities. This is mainly due to the fact that the duty on wheat is low as compared with that on flour. Wheat pays only 3.50 marks per 100 kilograms (83.3 cents per 220 American pounds). It is evident that Germany desired thus to create a most efficient system of protection for its own mills. It is, however, impossible to obtain an estimate as to the quantities of American wheat imported into Bavaria, as direct importations have hardly been made, but nearly all through Mannheim houses. Mannheim, I hear, has been the principal market for American wheat and wheat flour for southern Germany, including the Kingdom of Bavaria. This is caused by the fact that all shipments from the United States to Bavaria must go via Rotterdam or Antwerp up the Rhine to Mannheim, this being the shortest and cheapest route from the United States to Bavaria. In the city of Mannheim are those large grain-importing firms who sell these cereals to the millers and dealers in Bavaria.

QUANTITY OF WHEAT FLOUR AND WHEAT IMPORTED FROM OTHER COUNTRIES.

The quantity of wheat flour imported from other countries into Bavaria during the years 1885 and 1890 are said to have averaged 3,400 tons (one

ton = 2,204.6 American pounds) per annum, coming mainly from Austria-Hungary; in the year 1891, 6,000 tons, and a like quantity in the year 1892.

The imports of wheat during the years 1885 and 1890 have averaged 37,000 tons per annum; in 1891, 28,000 tons, and a like quantity in 1892.

OBSTACLES TO TRADE.

Obstacles in the way of extending the trade in American flour are: (1) The high duty; (2) the excellent crops of recent years, together with the large quantities of wheat flour imported from Austria-Hungary, by which the market became overstocked and prices depressed; and (3) the preference which, until now, has been given to home-grown and Hungarian flour as long as there was an abundance of such.

PROSPECTS.

An improvement in the importation of American wheat flour would take place if the crops of Bavaria and Austria-Hungary should happen to be less plentiful, and if the United States would send over only the best and finest grades, which are the most used here, as the quality of American flour imported in former years could not compete with the excellent quality of the Hungarian flour.

Nuremberg, through its central location in this Kingdom, would no doubt be a good starting point for any fresh experiments concerning the importation of wheat flour into Bavaria, whether by establishing agencies or by making consignments to leading firms. One of the largest flour firms in Bavaria is the firm Gebrüder Soldan, in Nuremberg, to whom, in a great way, I am indebted for the information contained in this report.

SIGMUND DUNKELSBÜHLER,

Vice and Deputy Consul.

NUREMBERG, *January 25, 1894.*

PLAUEN.

STANDARD OF LIVING.

The upper classes of this district live well and are prepared to eat the best flour they can get. The lower classes have for years eaten nothing but rye bread, the best of which is made by mixing a little wheat flour with the rye; wheat bread is considered by them a luxury.

FLOUR MOST USED.

Hungarian wheat flour is the most popular with the bakers for all fine bread and pastry.

IMPORTS OF AMERICAN FLOUR AND WHEAT.

I regret that it is impossible for me to obtain any accurate information on these heads. I learn from the dealers in flour that during the last few

weeks a small quantity of American flour was sent into this district to be distributed among the bakers. The opinions expressed about this flour are most favorable, as it is lower in price and of better quality than the Hungarian. This, as the commission man from whom I have gathered my information remarked, "is saying a good deal, as the German flour market has never been as low as it is at this moment." Thus if American flour can compete on a low German market it can certainly do better on an average one.

It appears, then, that all that is required to introduce the American flour to the bakers of this district is activity among our flour-mill owners, who should be in the field with their product as soon as possible, in order to hold the favorable opinion of the consumers.

It is impossible for me to tell what amount of American wheat is marketed in this district, as the grain comes through the hands of brokers in Hamburg and Bremen, and is by them delivered to the local mills.

EXCHANGE FACILITIES.

Drafts on London or the United States are readily given by any of the local banks, who generally have correspondents in the United States or London.

OBSTACLES TO TRADE.

I know of none at present, and, unless the duty is raised this year to protect the farming interest of the country, who are clamoring for an increase of duty on farm products, there can be none.

TRADE OUTLOOK.

The prospect for American flour, from what I gather from the handlers, is good. If the American millers will unite for the purpose of export, appoint competent agents in the principal cities of Germany, who will have subagents in the local towns, all working for the same end, sending nothing but the best flour and at prices as low as is consistent with profit, there can be but one result—the success of American flour.

T. W. PETERS,
Commercial Agent.

PLAUEN, *January 20, 1894.*

STETTIN.

STANDARD OF LIVING.

The standard article of consumption in this district is rye flour. The quality used is mostly rye flour mixed with low-grade wheat flour. The fine quality of wheat flour is eaten only by a limited class of foreigners and wealthy people living mostly in the cities.

IMPORTS OF FLOUR AND WHEAT.

In 1891 there was no import of American flour into this district; in 1892 three-tenths of a ton was imported for sample purposes; in 1893 a considerable increase is shown, as there were 114,500 pounds imported.

In 1891, owing to the heavy droughts and failures in grain, 601,769 bushels of wheat were imported into Stettin from the United States; in 1892, 59,230 bushels; and in 1893, owing to the abundant harvests of Pomerania, only 15,911 bushels.

The following is a table of the flour imports from other countries:

Countries.	1891.	1892.
	Tons.	*Tons.*
Denmark	0.1	0.8
England	3.6	8.3
Norway	0.2	.....
Russia	11.7	6.3
Sweden	.....	0.1

Statistics for 1893 are not yet published. The imports that year were about the same as those for 1892.

The wheat imports from other countries than the United States were as follows:

Countries.	1891.	1892.
	Tons.	*Tons.*
Belgium	0.1	5,669.7
Denmark	12.9	1,063.1
England	26.4	0.4
Russia	25,665.8	.....
Sweden	13.8	14.1
Turkey	.....	1,286.4
Netherlands	.....	211.3

There was but a slight difference in the imports of wheat in 1893 as compared with 1892.

SHIPPING FACILITIES.

Stettin has excellent shipping facilities. It has two direct lines of ocean steamers—the Hamburg-American and Thingvalla lines. These companies have four and five steamers, respectively, plying between Stettin and New York. There are also numbers of sailing vessels engaged in this trade.

The freight per ton by steamers from New York to Stettin is: Flour, $6.07; wheat, $3.93.

OBSTACLES TO TRADE.

The only obstacle in the way of the extension of trade in American flour is the high tariff.

I think that a lower grade of American flour introduced into the German markets would bring quicker sales. This must be accomplished by a more extensive agency.

TRADE OUTLOOK.

The prospects of doing a great business in American produce is not very bright in this district, which produces more than it consumes and which is continually exporting inland and to other countries.

F. W. KICKBUSCH,
Consul.

STETTIN, *January 19, 1894.*

STUTTGART.

QUALITY OF FLOUR CONSUMED.

The people here have a slight prejudice against American products of all kinds.

A fine quality of flour is principally used, although an inferior grade is largely utilized for black and rye bread.

AMERICAN FLOUR AND WHEAT.

No American flour has been imported into Würtemburg since the duty was raised to 7.50 marks per 100 kilograms.

No records are kept of the quantity of American wheat imported, as importations are not made directly from America, but through wholesale dealers in Hamburg, Bremen, and other seaports.

No records are kept of the amount of wheat flour received from other countries, but it comes mostly from Hungary.

In the beginning of 1893 Roumanian wheat ran a close competition with the American, and toward the end of the year the American wheat was driven from the field.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are very good, every bank readily buying or selling American money. In selling, the banks allow, on an average, 4.17 marks per $1; in buying, 4.20 marks per $1 is charged.

OBSTACLES TO TRADE.

To my knowledge, there are no obstacles in the way of the extension of trade in American flour, no discrimination being made against the United States in the way of duty. In fact, the United States, with other countries having a commercial treaty with Germany, pay 7.50 marks per 100 kilograms on flour, whereas those countries not having this treaty pay 10.50 marks per 100 kilograms.

TRADE OUTLOOK.

If the American flour is equal in quality to any other, and the price is as cheap or a little cheaper, I see no reason why an extensive business can not be done.

In conclusion, I beg to inclose herewith five samples* of flour, with prices, as follows:

	Marks.
100 kilograms, with sack, finest Kaiser flour	27.00
100 kilograms, with sack, flour No. 1	24.00
100 kilograms, with sack, bread flour No. 2	22.50
100 kilograms, with sack, bread flour No. 3	20.50
100 kilograms, with sack, bread flour No. 4	17.50

ALFRED C. JOHNSON,

STUTTGART, *January 25, 1894.* *Consul.*

COLOGNE.

QUALITY OF FLOUR USED.

American flour would gladly be consumed by the population of this country if it could be sold cheap enough. Only small quantities of American flour come to this district, mostly for the purpose of mixing with lower qualities of German flour.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are the same as are usual between commercial countries.

Grain reaches this district from the ports of Antwerp, Amsterdam, and Rotterdam via the River Rhine. The cheapest way is via Rotterdam, as I am informed.

OBSTACLES TO TRADE.

American flour would, as already stated, find a ready market here if it could be sold cheap enough. The high duty on flour makes it nearly impossible for it to compete with German flour.

If the import duty on wheat flour were in proportion to that on wheat, it would be possible for American flour to compete successfully with German flour.

FRITZ SCHRÖDER,

COLOGNE, *February 21, 1894.* *Vice-Consul.*

FÜRTH.

STANDARD OF LIVING.

This is largely a manufacturing district. The majority of the people are consequently factory employés, receiving as wages amounts ranging from

* Filed in the Department.

about $2 to $6 per week. Considering these wages, it may readily be seen that the standard of living in this district can not be very high.

QUALITY OF FLOUR USED.

Among the working people or factory employés very little wheat bread is consumed. For breakfast only do they indulge in a luxury of this kind, while for the other two meals they content themselves with what is known here as "Schwarzbrod," a bread made wholly from rye flour. There is, however, a better grade of "Schwarzbrod" used by the better paid among the factory employés, as well as by the better class of the citizens generally. It is made from a mixture of wheat and rye flour. In this way a considerable quantity of wheat flour is consumed.

A part of the wheat flour thus used is grown here and the rest is either imported from Hungary or bought in Mannheim, the principal flour market in southern Germany. That bought in Mannheim is American flour, or supposed to be, but so far as I can learn, only about 2 cwts. of this flour are used here weekly, the great bulk of the wheat flour used in making both the "Schwarzbrod" and the white bread being imported from Hungary.

Upon careful inquiry, I find that the Hungarian flour costs about $2.37 per cwt., while that brought from Mannheim costs only about $2.05.

The dealers say that the Hungarian flour is more salable in this market, being regarded as better in quality than that brought from Mannheim. I presume that this Mannheim flour is an inferior grade or quality of American flour, but as to what grade it is I have no definite information.

TRADE OUTLOOK.

I see no reason, however, why American flour of a quality equal to that of the Hungarian flour should not sell just as readily in this market as the Hungarian. In the cities of Nuremberg and Fürth there are over 200,000 inhabitants, and I am quite confident that if proper steps were taken to introduce it here the trade in American wheat flour throughout the entire Kingdom of Bavaria might be very considerably extended.

H. C. CARPENTER,

FÜRTH, *February 1, 1894.* *Commercial Agent.*

BRESLAU.

OBSTACLES TO TRADE.

After diligent inquiries among the leading merchants in this city, and with the kind assistance of the Chamber of Commerce, I was able to ascertain that there are but poor prospects for an extension of the American wheat and flour trade in this district. The principal reasons are these: There is, first of all, a strictly limited demand for wheat flour, it being used only for light, fancy baking. The every-day bread, which constitutes the principal article of food, especially among the middle and lower classes, is

made of rye. It is very cheap, has an agreeable taste, and is considered by the people more nutritious than wheaten bread, for which reasons it is preferred; second, Silesia is a wheat-producing province, its soil being particularly adapted to wheat raising, and for the past two years there have been very good harvests. Last year's harvest was not only exceptional, so far as quantity and quality are concerned, but the weather was so favorable that the grain was easily and quickly brought under shelter. Toward the end of August large quantities were thrown upon the market, causing a rapid decline in prices, which almost put a stop to all imports. Prices are lower than they ever were before. A ton of wheat of good quality may be had for 140 marks ($33.32) while in former years the price was 250 marks ($59.50). Several of the flour mills are closed part of the time, because the price of flour is so low that grinding the wheat does not pay expenses.

Some German bakers assert, although apparently with doubtful reason, that flour made from American wheat, excepting the Red River brand, which is occasionally used unmixed, is not well adapted for baking unless mixed with a native brand.

IMPORTS OF WHEAT AND FLOUR.

The quantity of American wheat which came to this district in 1890–'91 was 15,000 tons; in 1891–'92, 20,000 tons; in 1892–'93, 55,000 tons. This increase, however, has not been kept up, and since the great fall in prices, already mentioned, the importation has almost entirely ceased. These shipments were bought up by the local dealers and millers from merchants in Hamburg, Stettin, and Berlin. They were brought here by water on the rivers Elbe and Oder, only small quantities coming by rail. During the same years 40,000 tons of wheat arrived from other countries.

American wheat flour has never come to this district, and there is no prospect of introducing it, unless it is considerably cheaper in price than the local flour.

TRADE OUTLOOK.

It will thus be seen that it will be very difficult to bring larger quantities of American wheat to this district as long as harvests are abundant and the market remains overstocked.

FREDERICK OPP,*

BRESLAU, *March 15, 1894.* *Consul.*

* CORN BREAD IN GERMANY.—In an appendix to his report on the "Extension of the Market for American Flour," Consul Opp writes as follows: "It was an original intention of mine to make an effort toward the introduction of corn bread as a food for the German people, for two reasons: First, because I know from experience that it is not only a very palatable bread, but is wholesome, cheap, and nourishing; second, were the effort successful, it would materially enhance the value of one of the staple and most reliable crops of our great Western and Southern fields. But my ardor in this direction has been somewhat cooled by the realization of the fact that the Germans never eat hot bread, and, of course, cold corn bread could never be recommended, whereas warm corn or egg bread could be indorsed to the fullest extent. This idea was more strongly impressed upon me by similar views expressed by the special representative in Europe of the Department of Agriculture—Mr. John Mattes. Were it a contest of warm wheat or rye bread versus warm corn or egg bread, there would be better hopes of ultimate success for the article which is almost indispensable to the laboring element of our western and southern country, but, since the Germans have been from time immemorial accustomed to wheat or rye bread in a cold form, another bread in a warm form will, of course, be slow in recommending itself. However, when it is remembered that almost all of their other dinner dishes are served fully as warm, if not warmer, than ours, there is no good reason why the bread should not be served in a like condition."

HAMBURG.

STANDARD OF LIVING.

The standard of living in the Hamburg consular district is a comparatively high one. The district embraces many flourishing cities and towns, and the agricultural population is on the whole a thrifty one. The people are quite ready to eat American flour when it offers advantages, regarding quality and price, over German or other flour.

QUALITY OF FLOUR USED.

The flour most used is a quality which sells at about $1.67 per bag of 220 pounds. There is also a fair demand for white flour, with good baking qualities, which sells at about $2.85 per bag of 220 pounds. Superior varieties, well milled, valued at $4.45 to $4.55 per bag of 220 pounds find strong competition in Hungarian flour.

IMPORTS OF WHEAT AND FLOUR.

The table following shows the quantities of flour and wheat imported into the free port of the city of Hamburg from the United States and other foreign countries during the calendar years 1891, 1892, and 1893.

Flour and wheat imported into Hamburg in 1891, 1892, and 1893.

From—	1891.	1892.	1893.
Wheat.	*Pounds.*	*Pounds.*	*Pounds.*
United States	135,690,500	388,792,360	125,859,580
Other countries	357,480,420	423,563,580	205,520,920
Total	493,170,920	812,355,940	331,380,500
Wheat flour.			
United States	2,909,280	14,586,660	50,360,640
Other countries	4,206,180	2,945,580	4,907,100
Total	7,115,460	17,532,240	55,267,740

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange in Hamburg, and for shipping from the United States to this port, are as good as in almost any port of the world.

OBSTACLES TO TRADE.

The only obstacles in the way of the extension of trade in American flour is, as far as I can learn, the price of our product. If prices can be lowered without lowering the quality of the flour, there appears to be no reason why the trade should not be very considerably increased.

TRADE OUTLOOK.

The grain trade is at present very much depressed, and in consequence the sale of American flour is extremely difficult. Unless this year's crops are exceptionally poor in Germany, I fear the outlook for the revival of the American flour trade in this country is a poor one.

CHAS. H. BURKE,
Acting Consul.

HAMBURG, *March 17, 1894.*

KEHL.

STANDARD OF LIVING.

Living in Alsace-Lorraine is expensive. The standard of living among the best classes is high, although wheat flour is not such an item in their diet as it is with similar classes in the United States.

Laborers in the wine-growing districts demand and receive an extravagantly large quantity of food, and wheat flour is a considerable item in it.

Army rations are of a very low order, but from the fact that the common soldier is well nourished it is easy to infer that the frequent receipt of packages from their homes supply this large fraction of Germany's population with a goodly share of the food stuffs in general use.

The food of the masses is principally coarse, but even the poor consume some good wheat flour.

QUALITY OF FLOUR USED.

I am informed by dealers in wheat that poorly milled American flour has been put on the market here, and in consequence the people are now afraid of the American manufacture. It was not learned where in the United States the flour spoken of was milled, and the evidence is not conclusive that the facts as stated are true. The people are ready to eat American flour if it is of a good quality. Retail dealers in Strassburg state they are not acquainted with the American product, but say they may get it mixed with other flour or under other brands.

The Hungarian is the best quality of flour used in this district, and it is used quite extensively. It retails here at 5 and 6 cents per pound.

The mills of Alsace put seven grades of flour on the market, made mostly from Pennsylvania red winter, Milwaukee spring, and Kansas winter wheats. A mixture of grades one and three and rye flour produces the grade in most common use.

Various grades of oatmeal are on the market, but in point of excellence none of them can compare with the best grades of American makes.

All classes consume bread for their morning repast made from good grades of wheat flour. Small breads made from good grades of wheat flour are the principal attractions on notion stands on the street sides. The

brick-shaped, turf-appearing "Bumberneckel"—a sort of bread made for soldiers and horses—does not contain any traces of wheat flour. Bread made of pure rye flour is used, but not to so great an extent as in other parts of Germany, and while the "black bread" is not used so much as in northern Germany, it is still used. Neither is this flour bread as good as in the north, where it is as delicious as the best Graham bread in the United States. This is the quality of bread Germans eat with butter.

IMPORTS OF FLOUR AND WHEAT.

It is very difficult to estimate the quantity of flour or wheat imported into this district. The Chamber of Commerce at Strassburg, after a delay of three weeks, excused itself from furnishing any information on the subject on the ground that it is not a diplomatic board. A similar reply, after a like delay, was received from the Chamber of Commerce at Mannheim.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are good. The bank of C. Schwartzmann, at Strassburg, does an exchange business with the United States. There are several other important banks in that city and elsewhere in this consular district. The great monetary centers of Frankfort on the one side and Paris on the other are only a few hours distant.

Mannheim is the nearest distributing depot. Strassburg may be reached by water.

A project is now on foot for the construction of a canal on the Alsatian side of the River Rhine from Strassburg to a navigable point in that river. This completed, Strassburg will have direct water communication with the seaport of Rotterdam, and it will become a distributing point for the territory south, including Switzerland.

OBSTACLES TO TRADE.

The obstacles in the way of American flour coming in are the disproportionate rates of import duties on flour and wheat, which serve as a protection for native mills; the fact that there are numerous mills in the district with apparent capacity for supplying the home demand; and the inborn tendency of the German to favor his home-products first.

TRADE OUTLOOK.

The farmers in Alsace have a surplus stock of old wheat on hand, which they refuse to market on account of low prices. The present price of wheat is at the rate of $1.21½ per bushel. If the proper quality of American-made flour should be put into the hands of good agents, I have no doubt but that its trade might be extended; but it must be remembered that a native commission man handling American and homemade flours, with equal profit to himself, will favor the sale of the home made article.

GEORGE KEENAN,

KEHL, *March 10, 1894.* *Consul.*

SONNEBERG.

STANDARD OF LIVING.

The standard of living in this district varies considerably. For the cities of Coburg and Meiningen, the seats of government for the duchies of Saxe-Coburg and Saxe-Meiningen, the standard of living among the official and upper class is equal to that which prevails in any part of the German Empire; while as to the manufacturing cities within the district, many of which contain populations of from 5,000 to 15,000 inhabitants, the standard of living is good among the merchants, business men, and property owners, but the contrary may be said to be the case among the working classes, owing to their limited means, the great depression in trade and industries, and the difficulty in obtaining suitable quantities and qualities of meat, vegetables, and fruits at reasonable prices in a section of country covered with forests and hills and so little devoted to agriculture.

The people do not seem to be ready to consume American flour, for the reason that rye flour is universally used among the middle and poorer classes, on account of its cheapness and wholesomeness. Those who use wheat flour consider the quality of that raised in Germany better and more desirable than the American.

IMPORTS OF FLOUR AND WHEAT.

The quantity of American wheat flour imported into this consular district can not be accurately given, this being an inland district. The following tables show the prices and the imports of flour and wheat into Germany during the calendar years 1891 and 1892, the statistics for 1893 being not yet published:

Wholesale prices of flour (with sack) and wheat per 100 kilograms (220.46 pounds) in December, 1893, in the principal cities of Germany.

Cities.	Wheat.	Flour.	
		Number.	Price.
Berlin	$3.42	00	$4.88
Breslau	3.14	00	4.80
Cologne	3.76	00	4.97
Dantzic	.....	00	4.40
Frankfort	3.61	.....	.....
Halle	3.36	00	*5.39
Königsberg	3.14	.....	.....
Leipsic	3.40	.....	.....
Lindau	4.61	.....	.....
Lübeck	.....	0	4.76
Mannheim	4.09	.....	.....
Munich	3.94	2	6.23
Posen	3.16	00	4.76
Stettin	3.34	.....	.....

* Without sack.

Imports of flour and wheat into Germany.

Whence imported.	Flour.		Wheat.	
	1891.	1892.	1891.	1892.
	Kilograms.	*Kilograms.*	*Kilograms.*	*Kilograms.*
United States	5,326,000	25,815,000	2,536,507,000	6,582,534,000
Russia	5,691,000	4,641,000	7,687,048,000	1,464,435,000
Belgium	1,150,000	7,377,000	455,677,000	230,598,000
Bulgaria	.....	.....	16,517,000	567,421,000
Denmark	.....	.....	9,783,000	43,997,000
France	5,595,000	5,931,000	4,987,000	3,593,000
Great Britain	444,000	2,144,000	8,087,000	15,674,000
Netherlands	332,000	2,123,000	142,745,000	96,229,000
Austria-Hungary	153,013,000	219,905,000	653,899,000	369,169,000
Roumania	.....	1,685,000	752,073,000	974,008,000
Switzerland	8,258,000	7,646,000	8,831,000	2,333,000
Servia	.....	8,054,000	85,854,000	140,882,000
Turkey	.....	.....	34,661,000	197,664,000
Australasia	376,000	.....	31,978,000	2,014,000
British India	.....	718,000	303,497,000	536,720,000
Canada	.....	607,000	12,702,000	135,834,000
Dutch India	.....	.....	3,382,000	3,508,000
Argentine Republic	481,000	481,000	220,759,000	982,159,000
Brazil	.....	.....	16,669,000	9,497,000
Chile	.....	.....	100,399,000	124,754,000
Hamburg free port	615,000	663,000	.....	.....
All others	478,000	362,000	13,790,000	8,500,000
Total	181,759,000	288,152,000	13,099,845,000	12,491,523,000

DUTIES.

The import duty on wheat flour from the following countries having a commercial treaty with the German Empire is $1.74 per 220.46 pounds, viz: The United States, the Argentine Republic, Belgium, Chile, Costa Rica, Denmark, Ecuador, France, Greece, Great Britain, Guatemala, Hawaiian Islands, Honduras, Italy, Korea, Liberia, Dominican Republic, Madagascar, Morocco, Mexico, Netherlands, Austria-Hungary, Paraguay, Persia, Salvador, Sweden and Norway, Switzerland, Servia, South African Republic, Turkey, Egypt, Bulgaria, Zanzibar, and (since April, 1894) Russia.

The duty on wheat from those countries is 83 cents per 220.46 pounds. The import duty on wheat flour from countries not mentioned above is $2.50 per 220.46 pounds, and on wheat $1.19 per 220.46 pounds.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are as perfect in this district as in almost any part of the commercial world. Large and small places have banking houses well conducted and directly connected with Frankfort, Berlin, London, Paris, and other large financial centers.

The facilities for shipping from the United States are by the large steamship lines to the ports of Bremen, Hamburg, Antwerp, and Rotterdam; thence by direct rail communication to all places within this district. The average time from ports of entry by rail is twelve to twenty hours.

OBSTACLES TO TRADE.

In consequence of the favorable commercial treaty recently entered into between Russia and the German Empire, taking effect April 1 of this year, which accords to Russia rates of duty as favorable as to other countries, and considering, further, that Russia is a great grain-producing country conveniently located, I am of the opinion that the import of wheat and flour from the United States will not increase unless the trade is actively worked.

Flour is not sold to families by the quarter sack or barrel, as in the United States, but in smaller quantities by the pound, and homemade bread is a product almost unknown in the large cities of Germany.

The bakers furnish families with their daily bread of wheat flour, and the consumers seldom know or even inquire as to the origin of the flour if the quality of the bread is good. The bakers have their unions in all important cities, and naturally control, to a considerable degree, the market for flour.

As Germany is an industrial country, and as her trade has been seriously injured within the past two or more years by the American tariff policy, a considerable feeling has been created in a general way, and the bakers, millers, and even the press have discouraged the use of American flour, one reason given being that its transportation so long a distance is damaging and renders its quality inferior to German flour. If an opportunity is offered to criticise our flour or other merchandise, or if it can be proved in any way that the same, as compared with other samples, is of inferior quality, a prejudice is at once created which it is difficult to overcome.

TRADE OUTLOOK.

In years of the most abundant crops Germany is unable to produce sufficient for the needs of her people. At the same time there is a decided feeling in favor of a protective policy on all agricultural products, this tendency being clearly shown during the recent debates in the German Parliament while the Russian treaty was under discussion.

Rye flour will undoubtedly remain for years to come the standard for the masses. In the large cities, among the wealthier classes, the use of wheat flour is, however, steadily on the increase.

The American grain and flour merchants will have much to contend with in the way of freight, duty, incidental expenses, and prejudice against American merchandise; but with the exceedingly low price of our breadstuffs, a display of energy and perseverance will hold the present trade with prospects of an increase.

It is a matter of fact that, while prices of living have steadily advanced for years in Germany, with no prospect of reduction, owing to high rents, heavy taxation, and other causes, the standard articles of food have become cheaper in the United States.

If the market price lists of both countries are compared, it can not but appear strange that American cheese, smoked meats, flour, and other food

products have not had a more extensive market and sale in Germany. This, in a great measure, is the fault of our merchants.

It is well known that an American merchant displays an immense amount of energy and "go," as we term it, with his home business and affairs, but when it comes to foreign trade the contrary is, unfortunately, the case. He simply contents himself with asking for information from consular officers and sending out a few circulars to be distributed, without samples, expecting that trade will follow; but this is a mistake. In my long experience in the consular service in Germany I have had hundreds of such inquiries by letter, have always answered them promptly and fully, but seldom have I seen a representative of an American house, fully equipped for work, put in an appearance with samples and all that might be necessary to successfully push his business.

In conclusion, I beg to say that the question of increasing the American trade, not only in grain and flour, but in other directions, resolves itself into three important points, viz:

(1) A question of lower prices, which all householders will readily take advantage of.

(2) Quality, which should be superior, and there is no question in my mind but that the finer grades of American flours are superior to any in the world. This has been the general verdict of Americans keeping house in Germany.

(3) Not leaving the matter to local agents in the country, but giving personal application to the work, with energy equal to that displayed at home.

D. J. PARTELLO,
Consul.

SONNEBERG, *April 15, 1894.*

GREECE.

I have the honor to forward a report prepared by Consular Agent McDowall, of Piræus:

I am convinced there is no market in this country for American wheat flour under present conditions of communication between the United States and Greece. All goods imported from the United States must, for want of a direct line of steamships, come via British, French, German, or Italian steamers and be transshipped once or twice before reaching a Greek port at very heavy freight rates, considerable damage to goods, and much loss of time. As the Greek markets are too small for full cargoes of perishable goods, no one would ever try the experiment of bringing a full cargo of flour. Wheat flour is not largely imported into this district; the little that is imported is of the finest quality and is used by confectioners. It is shipped from Trieste and Odessa. With the exception of this imported flour, all the rest used is milled in the country.

Greece produces about half the wheat she uses; the remainder is imported from Russian ports on the Black Sea, the Sea of Azov, the Danube, and from Turkey. No American wheat or wheat flour has ever come to this port in my recollection.

STANDARD OF LIVING.

The standard of living (in reference to the consumption of wheat-flour bread per head of the population) is high. The people are doubtless ready to eat American flour if they could get it cheaper than that with which they are now provided and of equal quality.

All qualities of flour are used.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are good, so long as the money or bills are for francs or pounds sterling. Dollars, or bills in dollars, are not dealt in in this country to any extent, and considerable loss would ensue from drawing in them.

There are no direct facilities whatever of transport from the United States to this port.

OBSTACLES TO TRADE.

Want of direct communication and cost are the chief obstacles in the way of extension of trade in American flour. There are no prospects whatever, in my opinion, for doing any business at all in American flour in this country.

A. C. McDOWALL,
Consular Agent.

PIRÆUS, *February 20, 1894.*

PRICES.

Consul Horton (of Athens) adds:

The "finest quality" alluded to in Mr. McDowall's report is poor flour according to American standards, and retails here at 1.20 drachmas per oke, which, taking difference of exchange into consideration, amounts to about 5 cents per pound. The flour ordinarily supplied to consumers in this country is a very inferior article and costs less.

Perhaps Mr. McDowall's last statement is too sweeping and pessimistic. In other respects I should consider the information furnished by him as correct.

IMPORTS OF FLOUR AND WHEAT.

The latest statistics to be had are for the year 1892. During 1892 the following quantities of wheat flour were imported into Greece:

From—	Quantity.	From—	Quantity.
	Pounds.		*Pounds.*
England	87,472	Germany	11,088
Italy	4,312	France	30,372
Austria-Hungary	787,618	Total	1,429,185
Russia	313,790		
Turkey	194,533		

Wheat and a mixture of wheat and rye are given together in the statistics. In 1892 there were imported the following quantities of wheat and the mixture of wheat and rye:

	Pounds.
Roumania	52,976
Turkey	91,726,219.2
Italy	2,956.8
Russia	126,085,467.2
Total	217,867,619.2

DUTIES.

The import duty on wheat flour (American and other) is 11.95 francs ($2.30), or 15.80 drachmas, per 100 okes, the oke being 2.8 pounds. The import duty on all wheat, and the mixed wheat and rye, is 7.35 francs ($1.42), or 9.72 drachmas, per 100 okes.

Nations under special commercial treaties may import flour with a duty of 6.50 francs ($1.25), or 8.60 drachmas, per 100 okes; wheat and mixed wheat and rye, 4.11 francs (79 cents), or 5.44 drachmas, per 100 okes. No nation, however, has a special commercial treaty which includes flour or wheat.

E. ALEXANDER,
Consul-General.

ATHENS, *February 24, 1894.*

ITALY.

MESSINA.

STANDARD OF LIVING.

Compared with the American standard of living, that in this district is very much lower. Thirty years ago it was, with the exception of a few of the interior villages of Switzerland, the least expensive place to live in all Europe; but since that time the standard has gradually been raised. Nevertheless, it is even now remarkably low. The wages for unskilled labor average only 35 cents and skilled labor 45 cents per day. On these paltry sums the classes interested manage somehow to exist. Sometimes these wages are all that the peasant farm laborer or city mechanic has to feed six or seven hungry mouths, although there are very few of them who at all times successfully keep the wolf from their doors.

QUALITY OF FLOUR CONSUMED.

Twenty years ago the country people ate largely bread made from barley and maize, which have now entirely disappeared from consumption, and instead they only purchase good wheat flour. The octroi, or excise, duties being much higher in the cities than in the rural districts, the quality consumed in the former is of a much inferior grade.

The people would only be too glad to get good American flour, but the importation is virtually prohibited in Italy by the very high tariff that went into effect a few years ago in order to protect home industries. The duties were then fixed as follows: Wheat, 5 lire* per 100 kilograms gross; wheat flour, 8.70 lire per 100 kilograms net; semola (hard wheat flour for making macaroni), 11 lire, gold.

IMPORTS OF FLOUR AND WHEAT.

Most of the flour used in the district of Messina comes from Venice, the millers of that city, for some unexplained reason, being able to undersell those of Calabria and Sicily.

The imports of wheat into this district during the year 1893 were 30,674,935 kilograms, principally from Black Sea ports, but during the years ending June 30, 1891, 1892, and 1893, there were no imports of wheat or wheat flour from America or of wheat flour from any country.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are good.

There is no direct line of communication between the United States and Messina, but the steamers of the Navigazione Generale Italiana and those of

*1 lire = 19.3 cents.

the North German Lloyds accept shipments from New York for Messina on through bills of lading. The steamers of the Phelps line go from Catania, Messina, and Palermo direct to Boston and New York, but on their eastward trips touch at numerous ports both in the Mediterranean and Black seas before reaching Sicily.

TRADE OUTLOOK.

The greatest obstacles to the extension of trade in American flour in this district are the comparative duties on wheat flour and semola, as above stated, and the excise duty, which is 8.50 lire (paper) per 100 kilograms.

The prospects of doing any business at all in American flour here are very unfavorable and will remain so until the obstacles I have mentioned are either greatly reduced or absolutely removed.

CHAS. M. CAUGHY,
Consul.

MESSINA, *January 15, 1894.*

TURIN.

The standard of living in this, the Alpine, province of Italy is moderate, low in the rural and mountain regions, and but little better in the cities. In the former flour, as used by the average family in America, would be considered a luxury for which the peasant has neither a notion nor an appreciation, while in the cities, though the consumption of flour is large, the demand seems to be sufficiently supplied by the home article.

The flour most popular here is about equal to "B" (bakers') brand used in the United States, probably not quite as finely powdered; the wholesale price for mark "B" is 31.50 lire ($6.08) and mark "b" 28.50 lire ($5.50). per quintal (220 pounds).

According to the statements made by dealers in flour, by the railroad authorities, the inland tax bureaus, and according to the official statistics of the Chamber of Commerce of Turin, no importation of flour or wheat coming from the United States or any other foreign country is recorded. Still, a stray barrel or two of flour may have come to this district now and then from America.

Among the élite Hungarian flour is used for making fine pastry more as an *article de luxe* than a household necessity. The importation of Hungarian flour is insignificant.

I have been told by an authority on the subject that the mill men of this district favor for the very best article they bring to market a mixture of 75 per cent of the native wheat with 25 per cent of Russian and Roumanian wheat. The figures, however, as to the quantity of wheat brought to this district from the countries named I prefer not to give; they were based on too vague calculations and would only tend to mislead.

MONETARY AND SHIPPING FACILITIES.

Turin, being in close and constant communication with the capitals of the different European countries, offers easy facilities for money exchanges. Drafts on London or Paris against shipping documents at stated terms are most in vogue.

The most direct line for shipping anything from the United States to this inland district is by water way to Genoa. Railroad communication between Genoa and Turin is short and comparatively frequent.

Freight charges on wheat are 1.50 lire (29 cents) per 100 kilograms (1,000 kilograms=1 ton); on flour they are 2 lire (38½ cents) per 100 kilograms.

OBSTACLES.

The main obstacles are the high import duty which the Royal Government is levying on flour and the special tax levied by every community, no matter how small, on any article of food coming into the limits of its territory. Such local tax very often is unreasonable and outrageously high. In some little hamlets in this neighborhood the tax on flour is as high as 15 centesimi (1½ cents) per pound. So much as to the principal obstacles at this end of the line.

Even with the high Government duty and the local tax working against the importation of flour, an enterprising leading business house in Turin undertook to introduce American flour. Very kindly the head of the firm laid before me the extensive correspondence he had on this topic with several large milling concerns in Minnesota.

Samples sent from the United States proved to be satisfactory and the Italian firm figured out that by close calculation and shrewd management American flour could be sold profitably here.

The time given for payments here, as is the case over nearly all the Continent, is from three to six months. That did not suit the Minnesota parties; they demanded the privilege to draw on the Italian firm on delivery of goods at three-fourths of the value; of course, that was impossible for the Italian. Thus an experiment, promisingly begun, died in its embryonic state.

PROSPECTS.

Notwithstanding the drawbacks just mentioned, I am fully convinced that there is more than a fair chance to introduce American flour into this consular district.

The import duties levied by the Italian Government will remain, for it is utterly impossible to lessen them, on account of the deplorable state of its finances and on account of existing treaties of commerce. These factors always have to be taken into consideration.

A different matter is the commonalty tax, against which at present in Sicily the agitation has reached a state approaching open rebellion. That the extent to which communities are permitted to levy oppressive taxes on necessaries of life will hereafter be more under control of the National Gov-

ernment, there is in my mind but little doubt. They will be decreased, but they can not be altogether abolished.

With local taxes at a minimum, the main obstacle against extensive trade in American flour in this country is removed.

To a certain extent it is the fault of the American merchant if his articles do not find a ready market abroad. When a country desires to extend trade to another it should not stick to rules and customs established among tradespeople at home; on the contrary, it should carefully study the notions, requirements, and defects of the new market and cater to the tastes of the people it wants to deal with. Without adopting this principle, our merchants never will have success abroad; a too lofty standpoint taken by the party desiring to introduce wares into new lands is not likely to draw customers or to extend trade. The secret of success of the Germans lies in that. With their comparatively inferior goods they control pretty nearly every foreign market. Why? Because they have adapted their commerce altogether to the wants and habits of the nations they deal with, no matter if the latter are savage or civilized.

If American merchants could only be induced to follow a little the example of the Germans, the rivalry between the two nations in foreign trade would become lively. The final success is bound to be with the best articles, and they come from the United States.

W. E. MANTIUS,
Commercial Agent.

TURIN, *January 10, 1894.*

BOLOGNA.

In the provinces of Bologna, Ferrara, Modena, Reggio, Forli, and Ravenna, which comprise this consular agency, people do not make use of imported wheat flour, for the reason that the home production is sufficient for their wants. A small quantity of Hungarian wheat flour was formerly imported for the confection of cakes and the finest quality of bread, but the adoption of modern cylinder mills has put a stop even to this import.

In some provinces, such as Piedmont, Liguria, Lunigiana, Tuscany, and others in the north of Lombardy, the production of wheat is not sufficient for local consumption and some foreign wheat is imported, notwithstanding the fact that a great portion of the country people use maize flour.

The greatest competitor with American wheat in Italy is Russia, which sells its product at a very low price, owing to several reasons, viz, the low value of money in Russia, the cheap price of the soil (which in many localities is of almost incredible natural fertility), the low rate of wages paid to the laborers, etc.

The imports of the Russian product into Italy in 1892 amounted to 588,471 tons. American wheat is held in great esteem in Italy, principally "Red Winter" wheat, and it is gratifying to note that every year it is more in de-

mand. During the year 1891 the import of American wheat into Italy reached only 935 tons, while in 1892 it amounted to 19,938 tons, which promises well for the future.

CARLO GARDINI,

BOLOGNA, *February 12, 1894.* *Consular Agent.*

CASTELLAMMARE.

STANDARD OF LIVING.

The principal dietary in southern Italy consists of macaroni and other farinaceous food; and whether the people are ready to eat American flour, as asked in the circular, depends entirely on its fitness to be made into macaroni and whether it can be made into bread as cheaply as the home product. Given equal conditions of price, I believe American flour would be preferred, and if it can be sold in this market, after paying duty and calculating the loss on a debased currency, at less than Italian, Russian, or Indian wheat flour, it would certainly find a large demand and ready sale.

American grain is well adapted for making bread, and Michigan and California wheat—red wheat—is well adapted for macaroni, which requires specially hard grain.

In summer the poorer classes subsist chiefly on fruits, vegetables, and heavy, dark bread.

From 1860 to 1886 the general condition of the Italian people showed distinct improvement in regard to their consumption of cereal food, the years 1880 to 1886 marking the period of highest prosperity in this regard.

The rupture of commercial relations with France and a disastrous tariff war, which closed the doors to a profitable exportation of two of Italy's chief sources of profit—wine and fat cattle—have produced a disastrous effect on the prosperity enjoyed by Italy previous to that epoch.

A peasant's daily food up to 1880 generally consisted of Indian meal or rye bread, vegetables, beans, and chestnuts. Wheat bread was a luxury only indulged in on fête days or during times of illness. Public slaughterhouses existed only in a few of the great cities and fresh or salted fish was not to be had except, in most cases, when imported. Now, however, thanks to the general facility of communication on land and sea, people eat a large proportion of wheat in its various forms of macaroni and bread, and fresh, dried, and smoked fish is easily procured, even in the interior.

The regions that could be profitably served with American products through the ports of the bays of Naples and Salerno are five—the Abruzzi, Campania, Puglie, Basilicata, and Calabria.

The average amount of meat consumed by each individual in the above districts yearly is as follows: Abruzzi, 37⅔ pounds; Campania, 45 pounds; Puglie, 13½ pounds; Basilicata, 13½ pounds; and Calabria, 42¼ pounds.

There is a large profit made by the manufacturers of macaroni and bakers, for, notwithstanding the heavy fall in the price of wheat, its preparations

are sold at little less than when wheat was nearly double its present price. For instance, wheat bread costs the buyer 35 centimes per kilogram, while grain costs less than 21 centimes per kilogram. To remedy similar abuses coöperative bakeries have been established in many provinces of northern Italy.

IMPORTS OF WHEAT AND FLOUR.

No American wheat or flour was imported during the years 1891, 1892, and 1893 at any of the three large ports within this consular district. The following table shows the quantity of grain and flour imported from other countries during the period mentioned:

Cities.	1890–'91.		1891–'92.		1892–'93.	
	Grain.	Flour.	Grain.	Flour.	Grain.	Flour.
	Bushels.	*Barrels.*	*Bushels.*	*Barrels.*	*Bushels.*	*Barrels.*
Salerno	212,821	.....	280,056	.....	693,756	20
Castellammare	5,384	4	7,952	4½	.....	1¼
Torre Annunziata	1,634,808	.....	3,148,647	.....	3,058,023	.....
Total	1,853,013	4	3,436,655	4½	3,751,779	21¼

EXCHANGE AND SHIPPING FACILITIES.

The facilities for exchange are excellent, through bankers at Naples, by drafts on Paris or London.

This consular district has five ports, three of which are well protected and have fine harbors, viz, Salerno, Castellammare di Stabia, and Torre Annunziata.

Salerno—This port is situated on the gulf of the same name and was completed in 1888. It consists of a basin 35 acres in extent protected on the east by a breakwater 393½ feet long, extending south southeast from the shore, and on the west by another breakwater extending south for 393½ feet, south southeast 1,148 feet, thence running semicircularly 1,049½ feet east northeast until opposite the eastern breakwater, from which it is distant 328 feet, this forming the entrance to the harbor. The whole interior of the breakwater is lined by a quay on which are heavy columns for cables 26 feet apart. At the entrance the greatest depth of water is 21½ feet, and in some parts of the basin it is 23 feet; but the deepest part is near the breakwater to the south. The basin is well protected from all winds, but the entrance is difficult and dangerous in storms. The port is protected by two lighthouses, one at the end of the breakwater, a fixed red light visible 5 miles, and the other a fixed white light in the interior of the harbor opposite the entrance visible 4½ miles. The foreign commerce is carried on almost exclusively by English steamers, which import coal, American cotton, and grain from the Black Sea. The time allowed for loading or discharging steamers is as follows per day: Coal, 300 tons; grain, 200 tons. For sailing vessels it is: Coal, 60 tons; grain, 40 tons.

Castellammare di Stabia.—This port is situated in the Bay of Naples. The harbor is protected by a heavy stone breakwater extending to the north and, being situated at the base of a range of mountains 4,000 feet high, which rise directly from the sea, is protected from the southern or southwestern gales. A basin 49½ acres in extent gives good and secure anchorage to vessels of any size. Small vessels drawing from 10 to 18 feet can discharge directly on the quay, but larger vessels must discharge by lighters. The difference between high and low water is almost imperceptible, amounting to not more than 14 inches. Castellammare has two lighthouses; one is a dioptric fixed light, white, varied by three flashes every three minutes, visible 15 miles, and the other a red fixed light at the end of the breakwater, visible about 5 miles. The principal commerce of Castellammare is the importation of cereals for making macaroni, biscuits, bread, and alcohol. Rice for alcoholic purposes also is imported from Rangoon. Cereal products come from other parts of Italy, the Black Sea, northern Africa, and North and South America. Direct commerce is carried on with the ports of the Black Sea, Tripoli, Tunis, New York, Philadelphia, Bangor, Me. (shooks for orange and lemon boxes), Buenos Ayres, Rangoon, etc. Coal and iron are also imported from Great Britain and Marseilles. The usages of the port allow eight days for loading or discharging vessels under 100 tons; for vessels of 100 to 1,000 tons, fifteen days; and twenty five days for those over 1,000 tons.

Torre Annunziata.—This port is south southeast from the cone of Mount Vesuvius and is 4 miles from the town of Castellammare. It has developed extraordinarily within the last few years, at the expense of Castellammare. The basin is inclosed by two breakwaters of stone—one to the east, 886 feet long, and the other to the west, extending 2,919 feet. Both of these sea walls start from the shore at a distance one from the other of about 1,640 feet, and the width of the harbor's mouth is 1,213 feet, the inclosed space forming a protected basin of 61¾ acres. The breakwaters are strengthened by broad quays, which extend around the harbor, one side containing a railway track. The depth of water permits large steamers to discharge directly on to the quays, but not into the freight cars. At the entrance the depth is 29½ feet and varies from 23 to 26 feet in the basin, except close in shore, where it is 10 feet. The harbor is well protected from sea and wind. There are two lights, one at the end of the western breakwater, a fixed white light of sixth order, visible 8 miles, and the other a port light, green, and visible one mile. The commerce of Torre Annunziata is made up almost entirely of the importation of grain for macaroni, which comes from the ports of the Black Sea and India. The port is directly connected by rail with the lines of Gragnano, Castellammare and Naples. It is on the direct route between Naples and Brindisi, by which it is placed in direct communication with the network of railways of southern Italy.

OBSTACLES TO TRADE.

The only obstacle to trade in grain and flour from the United States is the competition of low-priced grain from the ports of the Black Sea and their

proximity to this market. For some reason no wheat from the United States has been imported here for many years, yet the macaroni manufacturers at Torre Annunziata tell me that they never had better grain for their purpose than the American red wheat, known, I believe, in the United States, as Mediterranean wheat.

TRADE OUTLOOK.

My opinion is that this region offers unusual advantages for the importation of American red wheat, because, as mentioned, it is superior to all others for macaroni.

There are 87 flour mills in the district of Castellammare di Stabia and 213 macaroni-paste manufactories at Gragnano and Torre Annunziata, which turn out on an average 65,726,760 pounds per year, worth $2,308,716, of which nearly 20 per cent is exported to the United States.

In the province of Salerno flour is manufactured in 139 communes at 631 mills, of which 3 are worked by steam and 628 by water power.

Italian paste manufacture, under its various forms of macaroni, is carried on in 27 communes, and 164 factories are employed in the business, which give employment to 1,288 men, 336 boys, and 3 women, in all 1,627 persons. The annual production exceeds 23,100,000 pounds, worth about $810,000.

Although there would undoubtedly be a large demand for American grain in this district, on account of the important quantities required for macaroni manufacture, the great abundance of Russian grain, forced to seek a market at any price, is a serious competition.

Italian exporters of macaroni receive a drawback on that made from foreign grain.

HENRY GREENOUGH HUNTINGTON,
Commercial Agent.

CASTELLAMMARE, *January 31, 1894.*

CATANIA.

STANDARD OF LIVING.

The bulk of the people, the working classes in particular, live nearly exclusively on bread of good, but second, quality, made of semolina. They are not ready to eat American flour, because flour is very little used in this city and province for bread-making purposes, except a small quantity for making soft bread. The quality most in use is that obtained from soft wheat (Majorca and Russian Ghirka), ground especially to obtain the little needed for soft bread (French bread) and biscuits.

IMPORTS OF WHEAT AND FLOUR.

No American flour was imported in 1891–'93, nor American wheat in 1891 or 1892. In 1893 there were imported 600,132 kilograms of wheat from the United States.

Imports of wheat and flour at Catania from countries other than the United States.

From—	1891.	1892.	1893.
Flour.	*Kilograms.*	*Kilograms.*	*Kilograms.*
Austria-Hungary	3,700	3,200	1,867
Italy	411,570	1,236,085	765,101
Total	415,270	1,239,285	766,968
Wheat.			
Russian	10,520,424	29,369,916	44,616,928
Turkey	4,182,335	.....	.....
Italy	260,250	241,605	134,165
Greece	.....	.....	566,816
Total	14,963,009	29,611,521	45,317,909

EXCHANGE AND SHIPPING FACILITIES.

Cargoes of wheat are usually paid for, immediately after being unloaded, in Italian paper currency, with 2 per cent discount, or by three months' acceptance from date after delivery. This last method of payment, however, is granted to purchasers only where the American shipper has a local agent.

From winter to spring there are plenty of English vessels here to take cargoes of green fruit to the United States. These vessels very seldom find return cargoes, and are therefore compelled to return in ballast, save when they go to load at New Orleans or Savannah, which happens very seldom. In view of this condition of affairs, steamers to take grain from the United States to Italy should be easily found, and at reasonable freight rates.

OBSTACLES TO TRADE.

The principal obstacles to the introduction of American flour into this province is the fact that almost all the bread consumed here is made only of "semolina." Flour is used in small quantities by confectioners and for making a limited quantity of soft bread, suitable to the taste of foreigners visiting this island.

The prospect for the enlargement of the American flour trade here is not good on account of the limited quantity of flour used, but American flour can find a large market in middle and upper Italy and Milazzo, where it is used exclusively for bread-making purposes.

AUGUSTUS PERATONER,

CATANIA, *February 10, 1894.* *Acting Consul.*

FLORENCE.

QUALITY OF FLOUR USED.

Flour is undoubtedly the staple article of consumption, and the Tuscan people would be but too glad to use the American article. That mostly used is: *Nostrale*, of this country; *gentile*, or soft wheat; *ferrarese*, or Ferrara; and Hungarian, used for fine bread.

IMPORTS OF WHEAT AND FLOUR.

No American wheat or flour was imported into this district during the three fiscal years ending June 30, 1893.

Bombay and Odessa wheat flour, and especially hard Russian wheat from the Black Sea for semoule, were on this market previous to the assessment of a duty of $1 per 2.838 bushels.

The following table shows the quantity of flour entered at Florence, with the amount of octroi duty (city duty) collected:

Year.	With semoule.	Without semoule.	Octroi duty.
	Bushels.	*Bushels.*	
1891	126,475,184	172,383,239	$73,404.38
1892	125,987,309	174,342,428	73,896.19
1893	128,616,503	186,413,691	77,632.28
Total	381,078,996	533,139,358	224,862.85

EXCHANGE AND SHIPPING FACILITIES.

The monetary exchange is perhaps the only drawback to the introduction of American wheat flour. The actual rate of exchange is now about 14 per cent.

Shipments of foreign goods are usually cleared at the seaports of Genoa, Leghorn, Venice, and Naples. This explains also why no record of imports can be obtained from the local custom-house.

TRADE OUTLOOK.

American merchants dealing in wheat or flour contemplating exports to Italy ought to be able to sell wheat at $2.50 per 2.838 bushels, in order to compete with the actual market price of $4.05. In fact, $4.05 is the price of 2.838 bushels at the railway station in the city of Florence, or $3.96 at Leghorn, Venice, Genoa, or Naples, of which $1.60 is calculated for duty and incidental expenses, and 30 cents for actual depreciation of American flour in competition with other flour, making the net price, in currency, at Leghorn $2.50.

American red winter wheat, in my opinion, will eventually become as popular in Italy as American petroleum, which competes successfully with the Russian article. As soon as the financial interests of Italy shall have reached a more normal condition and the premium on gold shall have been greatly reduced, there will be an excellent opportunity to introduce the American red winter wheat in Italy, into which 16,000,000 bushels of wheat are imported annually. It is, however, but right to state that it is believed that the Central Government is now considering the possibility of adding an additional duty on imported wheat. Should the Government take such action, it would make a considerable increase in the cost of the American article in Italy.

C. BELMONT DAVIS,

FLORENCE, *February 3, 1894.* *Consul.*

GENOA.

STANDARD OF LIVING.

The principal food of the people is wheat flour, the product of Italian mills, but they are ready to eat any brand of flour, no matter where it comes from, provided it is as good and costs no more than the Italian brand.

IMPORTS OF FLOUR AND WHEAT.

The commercial statistics recorded and published annually by the Genoese Chamber of Commerce are wholly for each calendar year. It is therefore impossible to give facts and figures for the years ending June 30 of each year, as required by the Department. Statistics for any given year are not published until about the close of the next following year. Thus, for instance, the statistics for 1892 were not ready for public inspection until December 5, 1893.

No American flour was imported in 1891 and 1892. American wheat to the amount of 39,339,222 pounds was imported in 1892; none in 1891.

Imports from other countries.

From—	1891.	1892.
Flour.	*Pounds.*	*Pounds.*
Argentine Republic	11,687	.....
Austria-Hungary	1,802	.....
European Turkey	1,541	.....
England	.....	379
Germany	.....	31,837
Total	15,029	32,216
Wheat.		
Argentine Republic	.....	20,301,339
France	32,594	.....
Russia	342,578,685	423,751,122
European Turkey	21,895,317	50,218,951
Asiatic Turkey	18,490,215	.....
India	70,717,756	46,540,725
Tunis	80,747	.....
Egypt	335,610	395,947
Total	454,130,924	541,208,083

EXCHANGE AND SHIPPING FACILITIES.

The general practice among Genoese importers for many years past has been to have an open credit in London and Paris banks in favor of the exporter. Among well-known business houses here, as elsewhere, special arrangements are made between buyer and seller for payment of bills in lieu of drawing on deposits in the hands of foreign bankers.

There are two regular lines of steamers—the Hamburg-American Packet Company and the North German Lloyd Company—plying now between the ports of New York and Genoa. There are also many freight steamers and

sailing vessels constantly plying between the ports of Genoa and the different ports of the United States. The records show that in the year 1893 ninety-seven bills of health were issued at this consulate to vessels clearing this port for the United States.

OBSTACLES TO TRADE.

The chief obstacle in the way of the extension of trade in American flour is the high duty imposed by the Italian Government on this necessary article of food. This high duty is levied for the purpose of protecting the national flouring mills.

TRADE OUTLOOK.

The prospect is not at all favorable for the sale of American flour in this section of Italy at the present moment, unless the American brand can be sold in this market as cheaply as the Italian flour.

JAMES FLETCHER,

GENOA, *February 22, 1894.* *Consul.*

LEGHORN.

QUALITY OF FLOUR USED.

The flour in general use here for making bread comes from Bologna, Florence, and Pistoja, where there are numerous steam mills. It is made of Italian wheat, which is soft. The flour used for making pastes (vermicelli, macaroni, etc.) is manufactured from hard wheat, coming principally from Russia and the Black Sea ports. Such hard wheat is ground here in steam mills, which employ 600 men and have an output of 154,000 pounds per day.

IMPORTS OF FLOUR AND WHEAT.

No American wheat or wheat flour was imported into this district during the three years ending June 30, 1893. The quantity of wheat flour imported from other countries amounted to 1,230 pounds in 1891 and to 35,747 pounds in 1892. The statistics for 1893 are not available.

The imports of wheat from foreign countries other than the United States amounted to 837,607 bushels in 1891 and to 1,205,582 bushels in 1892.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange, through private bankers and money-exchange brokers, who buy and sell according to quotations ruling at the bourse at Paris, are ample.

Shipping facilities are very good, but no steamship company except the Anchor line seems inclined to make Leghorn a direct port of arrival and departure from and to the United States. Even the steamers of the Anchor line run very irregularly, to the discomfiture of the shippers, who are sending their shipments from here to Genoa for transshipment to the United States. In some instances, however, shipments are sent to Liverpool by

English steamers, and thence transshipped to the United States. If this state of affairs does not change, the era of decadence is at hand, and Spezzia will wrest the palm from Leghorn as the port of entry and departure. I am informed that the English, German, French, and Austro-Hungarian governments have consuls stationed at Spezzia already, probably in anticipation of future developments.

TRADE OUTLOOK.

Under present circumstances the conditions are very favorable for the introduction of American flour. "Ex-State Shipping Brand" is quoted to-day in New York (as I notice in the newspaper cable report) at $2.15 per barrel of 196 pounds—*i. e.*, 11.15 francs for 88½ kilograms, or 12.70 lire, (francs command 14 per cent premium to-day). Hence the price of 100 kilograms would be 14.35 lire, which, with 2 lire added for transatlantic freight and insurance, would amount to 16.35 lire, national and octroi duties not included.

One hundred kilograms of flour, similar in quality to such "Ex-State," command 28 lire at the mills of Bologna, Florence, or Pistoja; the freight hither (to railway depot at Leghorn) is 1 lira per sack of 100 kilograms.

I would not, under any circumstances, advise the shipment of flour in barrels; it should be shipped only in sacks of 100 kilograms (220 pounds avoirdupois) gross, *i. e.*, including the weight of each sack.

ALEXIS ROSENTHAL,

LEGHORN, *February 21, 1894.* *Consul.*

PALERMO.

STANDARD OF LIVING.

Bread and macaroni made from wheat flour are the principal articles of food in this consular district. There is a market here for wheat itself, but the flour used here is quite different from the American product.

QUALITY OF FLOUR USED.

The flour most used is made from Sicilian and foreign grain mixed, one of the former to two of the latter. There are seven flour mills in Palermo. All of the flour that is consumed here is made here; practically no foreign flour is used.

IMPORTS OF FLOUR AND WHEAT.

There was no American flour or wheat imported during the years under consideration. The imports from other countries were as follows:

Year.	Flour.	Wheat.
	Kilograms.	*Kilograms.*
1891	216	7,703,872
1892	7,774	6,658,425
1893	4,888	25,702,479

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are good, there being several banks in the city.

The facilities for shipping from the United States to this port are good. Fruit steamers leave the principal ports nearly every week, sometimes returning here almost in ballast. A fair cargo would insure their returning directly here.

OBSTACLES TO TRADE.

American wheat coming to this market would have to compete with Russian or Black Sea wheat, as it is called. Foreign wheat is said to be unsuitable for making macaroni, because the dough or paste from which it is made requires a hard grain, so that it can be worked to advantage; it is for this reason that Sicilian is mixed with foreign grain.

TRADE OUTLOOK.

Dealers in wheat or flour, or in anything else, for that matter, can not be successful in finding a market for their goods unless they send capable agents here to represent them who speak the Italian or French language. It must be remembered that English, French, and German dealers have a great advantage over the American dealer, simply because they have realized this fact and have their agents here.

WM. H. SEYMOUR,
Consul.

PALERMO, *February 20, 1894.*

ROME.

STANDARD OF LIVING.

In the rural districts the standard of living is moderate. Wheat flour is the chief article of diet of the laboring class, either as bread or macaroni. In Sicily I have heard laborers say that American flour is too "fine;" that for hard work they required coarser food; that American flour was not as nourishing as flour of their own manufacture. The laborer prefers a flour not so finely bolted as our American flour. The consumption of wheat flour is also very large in the towns, where American flour is justly appreciated.

The price of bread to-day in Rome is: For superior quality, 4⅜ cents per pound; for first quality, 3½ cents per pound; for second quality, 3 1/10 cents per pound; for third quality, 2⅝ cents per pound.

The mean price of wheat bread in Italy for the past three years has been, per pound: In 1890, 3½ cents for first quality and 3 cents for second quality; 1891, 3¾ cents for first quality and 3 1/10 cents for second quality; 1892, 3⅝ cents for first quality and 3¼ cents for second quality.

The consumption of wheat throughout the Kingdom of Italy is expressed by the following figures:

Year.	Total consumption.	Population.	Consumption per capita.
	Bushels.		*Bushels.*
1890–'91	127,145,700	30,158,408	4⅛
1891–'92	134,103,035	30,347,291	4 7/16
1892–'93	130,658,238	30,535,848	4⅛

ITALIAN AND FOREIGN WHEAT.

The amount of Italian wheat remaining for consumption after deducting enough for seeding, together with the amounts of foreign wheat purchased for consumption during the years under consideration, are shown in the following table:

Year.	Italian.	Foreign.
	Bushels.	*Bushels.*
1890–'91	109,109,000	18,036,383
1891–'92	118,622,000	15,282,666
1892–'93	87,171,583	36,820,666

QUALITY OF FLOUR USED.

The quality of flour most used is that designated as No. 2. It costs today (February 1, 1894) at wholesale 34 francs per quintal, or 3 cents a pound, cost of transportation deducted, but including consumption, or octroi, tax.

IMPORTS OF WHEAT AND FLOUR.

During the three fiscal years 1891, 1892, and 1893 no wheat flour was imported directly from the United States into the district of Rome; and during the three calendar years 1890, 1891, and 1892 but 48 quintals of wheat flour (year 1890) were imported directly from the United States into Italy.

No American wheat was imported directly into the district of Rome during the fiscal years 1891, 1892, and 1893. The total direct importations of American wheat into Italy for the years 1890, 1891, and 1892 were as follows:

	Bushels.
1890	4,340
1891	34,300
1892	731,060

The quantity of wheat flour imported directly into the district of Rome from foreign countries for the calendar years 1890, 1891, and 1892 (no fig-

ures are available for the years ending June 30) is given in the following table:

Country.	Quantity.		
	1890.	1891.	1892.
	Pounds.	*Pounds.*	*Pounds.*
Austria	22,000	.....	440
Germany	.....	132,638	.....
Great Britain	127	.....	.....
Russia	17	.....	.....
Turkey	.....	.....	77
Total	22,144	132,638	517

The following quantities of wheat were imported directly into the district of Rome from foreign countries other than the United States—calendar years:

Countries.	1890.	1891.	1892.
	Pounds.	*Pounds.*	*Pounds.*
Russia	.....	.....	3,721,592
Greece	206,514	110	.....
Total	206,514	110	3,721,592

The following table shows the quantity of wheat imported into Italy from foreign countries other than the United States—calendar years:

Countries.	1890.	1891.	1892.
	Quintals.	*Quintals.*	*Quintals.*
Austria-Hungary	26,750	21,040	10,070
France	17,690	14,150	18,320
Germany	1,040	850	.....
Great Britain	.....	.....	6,010
Greece	58,180	41,020	13,680
Malta	990	.....	1,510
Roumania	619,080	300,290	428,540
Russia	4,630,450	3,097,920	5,247,750
Spain	5,010	.....	630
Turkey in Europe	97,600	597,910	435,370
English possessions in Asia	120,310	442,090	378,230
Turkey in Asia	780,630	52,570	110,650
Egypt	12,430	5,140	16,280
Tunis	52,350	15,210	7,730
Algeria	.....	.....	4,410
Brazil	.....	3,190	310
Argentine Republic	21,170	43,540	.....
Uruguay	5,010	.....	92,570
Total	6,448,690	4,634,320	6,772,050

The following table shows the quantity of wheat flour imported into Italy from foreign countries other than the United States—calendar years:

Countries.	1890.	1891.	1892.
	Quintals	*Quintals.*	*Quintals.*
Austria-Hungary	8,017	6,551	6,977
France	37	146	.....
Germany	102	806	155
Great Britain	71	.....	.....
Greece	.....	.....	135
Spain	99	.....	.....
Russia	66	.....	165
Switzerland	.....	139	.....
Turkey in Europe	.....	.....	33
Algeria	59	.....	.....
Tunis	.....	.....	48
Argentine Republic	295	56	.....
Brazil	628	.....	.....
Total	9,374	7,698	7,513

DUTIES.

The import duty on wheat flour from all countries is 8.70 lire per quintal, or three-fourths of a cent per pound; the import duty on wheat is 5 lire per quintal, or half a cent per pound.

EXCHANGE AND SHIPPING FACILITIES.

Facilities for monetary exchange are by means of international post-office orders and drafts on London or Paris.

The facilities for shipping from the United States to Italy are good—by the Hamburg-American and North-German Lloyd steamship lines weekly from New York and by the Italian steamship line, the Navigazione Generale Italiana.

OBSTACLES TO TRADE.

The table giving imports of wheat flour into Italy for the years 1890, 1891, and 1892 shows the amounts imported to have been small. Italian flour and Italian-grown wheat are protected by import duties of three-fourths of a cent and one-half a cent per pound each, respectively. There is comparatively but little demand for Italian wheat, due to the exportation of flour from Italy. This statement at first sight appears absurd, but the following explanation will make it clear:

The Italian law permits the exportation only of the products of grain imported into the country. If the mill-owners exported only the product of the imported foreign grain, there would be nothing to say. The question naturally arises, how is it that Italian mills grind for export? The answer is that even with the old system of mills, 100 pounds of wheat yield 74 pounds of No. 1 flour fit for bread, 9 pounds of low-grade flour (No. 2), 18½ pounds of bran, and half a pound of refuse. The low-grade flour (No. 2) is bought up at all the small mills that grind only Italian wheat. By adding

together all the amounts gathered up of flour No. 2, the sum total would not equal the amount in reality exported; but to flour No. 2 are added rye and corn flour, both well adapted to the mixture. Special machines are used in making this mixture. The miller then presents himself at the frontier custom-house with an article composed of 74 per cent of flour, 24 per cent of bran, and 2 per cent of refuse, and he has returned to him 5 lire on every quintal as a drawback on the foreign wheat supposed to have been imported by him. In this way flour No. 1 remains in Italy without having paid a cent of duty. This law is certainly an obstacle in the way of the extension of trade in American or any other foreign flour.

TRADE OUTLOOK.

I regret to say that I do not see any immediate prospect for doing a more extensive business in American flour in Italy, as just now there is a very important movement on foot to induce the Italian Government to still further protect both Italian wheat and Italian flour by increasing the import duties.

WALLACE S. JONES,
Consul-General.

ROME, *February 19, 1894.*

NETHERLANDS.

AMSTERDAM.

STANDARD OF LIVING.

The standard of living in this district is comparatively fair. The principal articles of food in the Netherlands are wheat, rye, and potatoes. American flour is well liked, and large quantities are annually imported and consumed.

QUALITY OF FLOUR USED.

The bakers' grade is the quality of flour most used.

IMPORTS OF FLOUR AND WHEAT.

The following table shows the quantity of wheat and wheat flour imported into Amsterdam during the years ending June 30, 1891, 1892, and 1893:

Year.	Wheat.	Flour.
American:	*Pounds.*	*Pounds.*
1891	16,426,960	10,961,834
1892	41,831,523	23,037,608
1893	28,537,520	41,624,842
Total	86,796,003	75,624,284
All other:		
1891	83,280,269	17,514,013
1892	47,180,867	8,362,527
1893	91,168,114	13,857,228
Total	221,629,250	39,733,768
Grand total	308,425,253	115,358,052

DUTIES.

Wheat and wheat flour from all countries are admitted free of duty into the Netherlands.

EXCHANGE AND SHIPPING FACILITIES.

As to monetary exchange the Amsterdamsche Bank, Twentsche Bankvereeniging, Lippmann, Rosenthal & Co., Adolph Boisservain & Co., and other similar banks and banking houses of Amsterdam afford excellent facilities in this line.

The Red Star line to Antwerp, the Netherlands-American Steam Navigation Company to Rotterdam and Amsterdam, and the North American

Transport line to Rotterdam afford the chief facilities for shipment from the United States to this port.

OBSTACLES TO TRADE.

Merchants here complain that the uncertainty of the time of transit is an obstacle in the way of the extension of the trade in American flour. For instance, as the local merchants claim, a shipment of flour to A, of Amsterdam, reaching the dock in New York (or other American port) is warehoused if an ocean steamer is not ready for loading; later shipments to other parties arriving, say, in New York by the time a steamer is ready for cargo are immediately placed on board, while the flour in the warehouse consigned to A may be left there indefinitely.

TRADE OUTLOOK.

If the time of ocean transit is rendered more certain, with due allowance, of course, for the prevailing financial depression, it is safe to say that the prospects of doing a more extensive business in American flour in this country are good.

EDWARD DOWNES,
Consul.

AMSTERDAM, *April 21, 1894.*

PORTUGAL.

THE AZORES.

By the laws of Portugal no wheat or wheat flour is allowed to be imported into the Azores. A small amount of American flour is used here and is preferred to that made from the wheat grown in these islands or in Portugal, but this is (and must be) imported from Lisbon.

The facilities for monetary exchange are quite limited, the exports, except to Lisbon, being exceedingly light. The exports to the United States for the past three years amounted to only $3,265.67.

There are two lines of steamers—four steamers—running between Portugal and New York via the Azores. There is also a bark owned in Boston running between that port and the Azores.

LEWIS DEXTER,
Consul.

FAYAL, *January 18, 1894.*

RUSSIA.*

STANDARD OF LIVING.

The standard of living in this district (St. Petersburg) compares favorably with that of other European countries, so far as the upper classes are concerned. The lower classes, however, especially the peasants, are less exacting in their tastes and needs than the corresponding classes elsewhere. There is no doubt whatever that the Russian people as a whole are ready to eat American flour, provided it costs them no more than the corresponding grades manufactured at home.

QUALITY OF FLOUR CONSUMED.

The Russian people seem to prefer black rye bread to wheat bread, not because the latter is more expensive, but because it lacks that peculiar taste and odor which they like. There is a Russian proverb that well expresses this tendency of the Russian people for this kind of food: "Of black rye bread one never tires and can never eat too much." It may be truly said that the lower classes—the soldiers—will select rye bread in preference to wheaten bread every time. I have personally asked this question on many occasions, and, if the person interrogated was Russian born, he invariably answered, "I prefer the rye." If, however, he was foreign born, his reply would be in favor of wheat. This view of the case, it should be understood, pertains more forcibly to the middle and lower classes; the better people eat both rye and wheat.

RUSSIAN WHEAT AND FLOUR.

Of the wheat flour, the qualities most used are the heavy flour made from *Triticum durum* and the light, *Triticum vulgare*. These two groups, however, contain several varieties whose denominations are not easily made out. To the hard wheat belongs first of all the *arnaoutka*, which is grown in the southern districts, and in some places is called *garnovka;* the next grade of hard wheat is a hybrid of *arnaoutka* grown extensively in the Volga regions, where it is called *bielotourka* when it comes from the sloping banks of the river and *koubanka* when raised on the surrounding hills. Of the soft wheats, the so-called *girka* leads, grown in the south; then comes the *russak*, or Russian wheat, grown in the vicinity of the Volga, and then the *saxonka*, or Saxon wheat; in the more western governments the *sendomirka*

* Consul Thomas E. Heenan, of Odessa, reports that no wheat or flour is imported into his district. Wheat flour is not used by the peasantry, who constitute nine-tenths of the population. No direct shipments are made to the United States, all goods being transshipped at continental or British ports. Occasionally direct shipments are made from the United States of cotton and agricultural machinery. The acting consul at Moscow also reports that no wheat flour is imported into his district.

is a prevalent species. On the markets these grades are classified as high, medium, and low, which are further subdivided by the addition of a suffix word to indicate the place of origin. The soft wheats are generally exported, while the local mills grind for home use a mixture of the hard and soft wheats.

Below is appended a table, which will give a general idea of the manner in which the mixed hard and soft wheats of different districts are worked up into different grades of flour and bran.

Percentage of flour of different qualities and bran produced.

Sorts.	Mills near—				
	Rybinsk.	Yaroslav.	Kostroma.	Nizhni-Novgorod.	Kazan.
Flour:	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
First quality	27.5	23.33	23	39.17	20.83
Second quality	28.5	16.66	28.5	29.17	30
Third quality	25	14.17	29.75	6.67	15
Fourth quality	9.8	12.5	13	4.17	9.17
Fifth quality	3.3	6.67	5.25	2.5	4.17
Sixth quality	1.7	5.83	4.3	.....	.....
Seventh quality	.....	4.07	2.1	.....	.....
Bran	18.8	15	16.1	16.66	16.66
Waste	2	1.77	3	1.66	4.17
Total	100	100	100	100	100

Sorts.	Mills near—				
	Samara.	Orenburg.	Saratov.	Livno.	Yelets.
Flour:	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
First quality	19.17	16.67	16.66	15.66	15.5
Second quality	40.83	41.67	20	39.58	39.5
Third quality	11.66	15	18.75	8.75	9
Fourth quality	4.58	6.67	14.58	4.58	3.75
Fifth quality	4.58	3.33	10.41	.....	.....
Sixth quality	.....	.....	8.33	.....	.....
Seventh quality	.....	.....	2.91	.....	.....
Bran	16.66	16.66	16.46	27.68	27.5
Waste	2.52		1.9	3.75	4.75
Total	100	100	100	100	100

IMPORTS OF FLOUR AND WHEAT.

As indicated at the outset of this report, the import of flour into all Russia from all sources is altogether insignificant, due, first, to the fact that Russia is a great exporter of grain, and, second, to some extent at least, to the high customs tariff. In 1890 the total import of flour amounted to 3,170 tons and in 1891 to 2,120 tons, these figures including a considerable quantity of groats and malt. The import of wheat in the kernel may be set down as practically *nil*, and is confined to seed wheat. It should be added here that,

though Russia exports enormous quantities of the grain, it exports very little flour, as shown below:

Flour of all kinds, except potato:	Tons.
1889	49,795
1890	39,300
1891	41,283

There was practically no import of American flour into Russia in 1892, except that brought by the five relief ships, and which was distributed among the famine sufferers and therefore did not enter into the custom-house statistics.

The figures are not yet made up to indicate the import of wheat flour into Russia for the year ending June 30, 1893. I have learned, however, on inquiry that the sum total is practically so small as to be inappreciable.

No American wheat in the kernel has been imported in the years mentioned, except small quantities for seed purposes and for experimental stations.

The import of wheat flour into Russia is so unimportant that no statistics are given to indicate from what country it comes.

DUTIES.

The import duty on flour from all countries is 20 copecks per pood brutto, or practically the equivalent of 10 cents per 36 pounds. Wheat may be imported into Russia free of duty.

EXCHANGE FACILITIES.

The facilities for monetary exchange can not be said to be good. All business is transacted in Russia on the basis of the paper ruble, which is always a depreciated currency and has fluctuated during the past four years between 85 and 115 rubles to the £10. These fluctuations are often very sudden, and there is no way of estimating what the rate of exchange will be for thirty or even ten days ahead. Because of this state of affairs, in large and close negotiations the future exchange is bought at the banks to cover the time of the deal. This, however, is sometimes very expensive, especially if the ruble is panicky, as the bankers must take a considerable margin in order to cover their risk. It should be definitely understood that there is practically no such thing as a metallic currency in Russia. There is nominally, however, a silver ruble, which, by the way, is never seen except in the show windows of the money-changers, and which at the date of this report is more depreciated than the paper ruble—that is to say, one can present 1,000 paper rubles, a seriously depreciated currency, to the Government Bank and receive in exchange more than 1,000 silver rubles. The monetary standard in Russia is gold, although no gold is seen in business. Its operations are confined exclusively to the payment of customs duties. The depreciation of the paper currency from the gold standard always corresponds closely to the depreciation of the paper ruble from the pound sterling. It

may be said that the value of the business currency of Russia is always estimated according to its exchange on London. This undesirable situation of the monetary exchange applies only to foreign markets. In the Empire the paper ruble is always the paper ruble, the prices of goods never varying with its depreciation on the foreign bourse. In other words, the paper ruble buys as much on the home markets with exchange at 115 as at 85 to the £10. It may be said that in the grain-export trade of Russia the fluctuations of the paper ruble often result in very serious consequences to the Russian farmers. For example, in 1890, with good prices prevailing on the London market for wheat, the exchange value of the paper ruble was so high that it became impossible to export the grain without a serious loss, the farmers receiving in consequence very few rubles for their goods in comparison with other years when the paper ruble was more greatly depreciated.

SHIPPING FACILITIES.

The facilities for shipping from the United States to this port (St. Petersburg) are good. It is unfortunate, however, in this respect, that there is no direct freight line from the United States to Russia, goods having generally to suffer transshipment at Hull. There is no local reason, however, why freight vessels from the United States should not come direct, as the port facilities here are excellent. For example, when the American relief ship *Leo*, drawing about 20 feet of water, came to St. Petersburg in the summer of 1892, she laid down her cargo at New Port, where the railway cars were waiting to transport it to different points in the interior.

RUSSIAN GRAIN EXPORTS.

I have thought that it would be interesting in this connection to supplement the foregoing with a brief report upon the grain-export trade of this country, as it will throw considerable light upon the several interrogatories propounded by the Department and answered above.

As indicated in the foregoing report, the export of grain from Russia, great as it is, is seriously affected from year to year by the fluctuations of the paper ruble on the foreign bourses, as well as by unequal demands on the foreign markets consequent upon the harvests of the importing countries and upon the crops of those countries which rival Russia in the international grain trade. To what a degree such circumstances may affect the Russian export trade of grain may be seen by comparing the exports in 1887 and in 1888, when the crops were abundant, with those of 1890 and 1891, when they were unsatisfactory. In 1891, notwithstanding the fact that the export of cereals was prohibited by imperial ukase a part of the year, the average wheat export was but little below the normal.

It is interesting to note that, notwithstanding the yearly fluctuations above mentioned, there is a steady and rapid growth in the grain-export trade of the Empire. This fact is seen in the following table, in which the export of grain is shown in five-year periods from 1866 to 1891.

Export of grain from Russia.

Years.	Yearly average.	Years.	Yearly average.
	*Poods.**		*Poods.**
1866–'70	127,800,000	1877–'81	275,900,000
1867–'71	147,200,000	1878–'82	282,400,000
1868–'72	149,200,000	1879–'83	275,300,000
1869–'73	163,900,000	1880–'84	267,500,000
1870–'74	191,400,000	1881–'85	294,000,000
1871–'75	193,200,000	1882–'86	305,800,000
1872–'76	196,200,000	1883–'87	322,600,000
1873–'77	218,600,000	1884–'88	363,300,000
1874–'78	256,200,000	1885–'89	394,800,000
1875–'79	279,300,000	1886–'90	413,300,000
1876–'80	279,800,000	1887–'91	437,800,000

* 1 pood=36 pounds.

The following table has been prepared by the Ministry of Agriculture to indicate the yearly average export of wheat, rye, oats, and barley for five-year periods from 1866 to 1890, showing at the same time their percentage of increase:

Yearly average export of the principal cereals from Russia.

Years.	Wheat.		Rye.		Oats.		Barley.	
	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.
	Poods.		*Poods.*		*Poods.*		*Poods.*	
1866–'70.....	76,700,000	100	19,800,000	100	14,800,000	100	7,200,000	100
1871–'75.....	92,000,000	120	53,000,000	268	23,800,000	161	11,700,000	162
1876–'80.....	110,400,000	144	82,900,000	419	42,600,000	288	20,500,000	278
1881–'85.....	123,800,000	162	60,500,000	306	51,100,000	345	32,000,000	444
1886–'90.....	160,700,000	210	82,000,000	414	61,100,000	413	61,200,000	850

From the foregoing figures it will be seen that, while wheat shows the lowest percentage of increase as compared with oats, rye, and barley, the absolute increase in the export of wheat shows the greatest proportions. Thus the export of wheat increased 84,000,000 poods, rye 62,000,000 poods, oats 46,000,000 poods, and barley 54,000,000 poods from 1866 to 1890.

It will be of considerable interest to the milling industry of the United States to tabulate the export of wheat flour from Russia as follows (no account being taken of the export to Finland, amounting to about 1,000,000 poods per annum):

Year.	Quantity.	Year.	Quantity.
	Poods.		*Poods.*
1882	1,981,000	1887	2,350,000
1883	1,339,000	1888	2,695,000
1884	2,013,000	1889	2,162,000
1885	3,492,000	1890	1,617,000
1886	2,487,000	1891	1,809,000

It will thus be seen that the export of wheat flour is inconsiderable when compared with that of the grain. The United States export more than half of their wheat in the form of flour, while Russia exports barely one per cent of her wheat in the ground condition.

The following table has been prepared to show the export from Russia of wheat, rye, barley, oats, buckwheat, and maize from 1881 to 1892, inclusive:

Export of breadstuffs from Russia.

Year.	Wheat.	Rye.	Barley.	Oats.	Buckwheat.	Maize.
	Poods.	*Poods.*	*Poods.*	*Poods.*	*Poods.*	*Poods.*
1881	82,224,000	38,325,000	20,683,000	39,053,000	721,000	13,588,000
1882	128,230,000	50,848,000	27,192,000	53,361,000	628,000	16,468,000
1883	140,665,000	69,144,000	39,862,000	60,182,000	1,899,000	11,086,000
1884	113,710,000	68,960,000	33,929,000	60,882,000	1,837,000	17,136,000
1885	154,058,000	75,060,000	38,437,000	38,938,000	2,460,000	8,670,000
1886	86,656,000	65,023,000	41,258,000	34,651,000	2,682,000	19,695,000
1887	130,619,000	77,553,000	58,541,000	61,061,000	2,609,000	29,761,000
1888	214,141,000	106,159,000	79,888,000	87,890,000	3,049,000	22,109,000
1889	190,388,000	84,303,000	65,766,000	70,144,000	1,516,000	26,898,000
1890	181,909,000	76,907,000	60,699,000	51,881,000	1,366,000	20,621,000
1891	176,097,000	68,005,000	45,974,000	45,962,000	1,385,000	28,209,000
1892	81,446,000	12,040,000	43,842,000	25,055,000	693,000	21,580,000

To give a general idea of the money value of the grain-export trade of Russia of all kinds, it may be said that in 1888, which was one of the best years, the figures amounted to 434,000,000 rubles, that is to say, in round numbers $217,000,000, and equaling in value about 55 per cent of the total export of the Empire.

The following table has been prepared to indicate, in a general way, the amounts of Russian grain exported to the principal European countries:

Shipment of grain from Russia.

Exported to—	Wheat.		Rye.	
	1889.	1890.	1889.	1890.
	Poods.	*Poods.*	*Poods.*	*Poods.*
Great Britain	66,100,000	60,100,000	.....	.....
France	23,100,000	18,100,000	500,000	.....
Germany	18,300,000	22,600,000	55,600,000	45,500,000
Holland	15,900,000	18,000,000	23,400,000	21,500,000
Belgium	6,600,000	5,800,000	1,700,000	2,100,000
Italy	38,600,000	28,200,000	.....	.....

Shipment of grain from Russia—Continued.

Exported to—	Oats.		Barley.	
	1889.	1890.	1889.	1890.
	Poods.	*Poods.*	*Poods.*	*Poods.*
Great Britain	43,300,000	27,700,000	24,400,000	25,600,000
France	5,800,000	2,700,000	3,600,000	1,600,000
Germany	14,500,000	10,600,000	18,300,000	22,300,000
Holland	7,000,000	8,200,000	4,400,000	8,700,000
Belgium	7,600,000	6,300,000	5,600,000	3,400,000
Italy	.....	.....	5,600,000	4,400,000

It will be seen from the foregoing table that Great Britain is by all odds the greatest importer of Russian grain and that Russia is a formidable rival of the United States in this particular on the English market, especially in wheat.

The total Russian export of the principal cereals in 1890 may be indicated as follows: Wheat, 181,900,000 poods (109,140,000 bushels); rye, 76,900,000 poods (48,792,661 bushels); oats, 51,900,000 poods (51,900,000 bushels); and barley, 60,700,000 poods (47,504,348 bushels).

J. M. CRAWFORD,
Consul-General.

ST. PETERSBURG, *January 7, 1894.*

FINLAND.

STANDARD OF LIVING.

The standard of living in my district is in general simple and economical. The people do not seem to care much for American flour. The quality of wheat flour most used is medium; rye flour is the principal flour consumed.

IMPORTS OF FLOUR AND WHEAT.

The quantity of American wheat flour that has been imported into my district has been very small, and of this no statistics can be obtained. Through private sources I have found that about 1,000 English tons were imported into this country during last year. This quantity was shipped partly by way of England and partly by way of Germany.

Of wheat flour from other countries, 23,000,000 kilograms were imported during 1892 and 34,000,000 kilograms during 1893.

Very little American wheat is imported.

Of wheat from other countries, 794,000 kilograms were imported during 1892 and 439,000 kilograms during 1893—from Russia chiefly and in smaller quantities from Germany and Denmark.

There is no import duty on flour or wheat imported from any country. All grain is duty free.

EXCHANGE AND SHIPPING FACILITIES.

The following banks transact business with the principal towns in Europe: Finland's Bank (Government Bank) at Helsingfors, established in 1811; Förennigs Banken i Finland, Helsingfors; Nordiska Aktic Banken för Handel och Industri, Helsingfors, head office at Wiborg; National Banken, Helsingfors. All these banks are respectable and safe and have branches in nearly every town in Finland; they have also correspondents in several of the principal towns in the United States.

There is a line of steamers from Boston and New York direct to Hull, called the Wilson line, and regular communication from Hull to Helsingfors, Hangö, and Åbo by Finland steamers leaving Hull every Saturday.

TRADE OUTLOOK.

The only obstacle to the extension of trade in American flour seems to be that the people do not care much for it. A more extensive business might be done if American agents were to come over and push the trade.

HERMAN DONNER,
Acting Consul.

HELSINGFORS, *January 24, 1894.*

SPAIN.

BARCELONA.

IMPORTS OF WHEAT AND FLOUR.

The total amount of wheat imported into Barcelona during the year 1890 was valued at $3,400,000. It came from France, England, Russia, Roumania, Asia, Africa, and the Argentine Republic. The total amount of wheat flour imported during the same year was valued at $11,172; it was received from France and Austria.

In 1892 the wheat imported into Barcelona was valued at $3,390,000, and the wheat flour at $3,368; it came from France, Italy, Austria, Russia, Turkey, Roumania, and the Argentine Republic.

In 1893 there were $1,857,574 worth of wheat and $118 worth of wheat flour imported into Barcelona from France, England, Russia, Roumania, the Argentine Republic, and the United States. The importation from the United States was wheat, which amounted to $360,000.

SHIPPING FACILITIES.

There is no direct line of steamships or sailing vessels between Barcelona and the United States, and the importations, therefore, came in "tramps" or by way of Marseilles or other foreign ports.

DUTIES.

As the United States have not followed the example of the other great powers in making a treaty or a *modus vivendi* with Spain, American imports into Spain are subject to the payment of the highest rate of duties.

TRADE OUTLOOK.

The only way to increase very largely our exports to Spain is to make a treaty with her, and I think that we would find her a valuable buyer if we would agree to reduce our duties on her wines and fruits.

HERBERT W. BOWEN,
Consul.

BARCELONA, *January 8, 1894.*

CARTHAGENA.

STANDARD OF LIVING.

Bread and vegetables are the principal articles of food of the poorer classes, and the Spaniards, on the whole, are great bread eaters. No doubt people here would be ready to use American flour, provided they could get it cheap enough.

IMPORTS OF WHEAT AND FLOUR.

The quantity of American wheat imported into this district in small parcels via Liverpool and London during the years ending June 30, 1891, 1892, and 1893 were 980, 730, and 1,069 tons, respectively. There was no American wheat flour imported during the same periods.

There were 9,600 tons in 1891, 15,608 tons in 1892, and 14,160 tons in 1893 of wheat flour imported into this district from other places—say Barcelona, Tarragona, and Marseilles—and 2,600 tons, 3,350 tons, and 4,280 tons of hard Taganrog wheat, respectively, during the same periods.

EXCHANGE AND SHIPPING FACILITIES.

There are no direct banking facilities between this district and the United States. American exporters would have to draw on the buyers payable here or have their drafts accepted here and payable in London or Paris, although the former plan would be generally insisted upon.

No facilities for shipping from the United States to our ports exist. The small quantities of American goods which come to this district and to the Spanish Mediterranean ports in general are received via London or Liverpool.

The high freights and the expenses of transshipping, etc., make it impossible for American goods to compete with those of European countries.

OBSTACLES TO TRADE.

The present tariff on flour of $2.66 per 224 pounds almost, if not wholly, shuts out foreign flour from the Spanish markets. The tariff on wheat is only $1.60 per 224 pounds. This enormous difference was established in 1891, upon the expiration of the commercial treaty with France, chiefly to shut the Spanish markets to flour imported from France, and also to favor local flour producers.

TRADE OUTLOOK.

To do a more extensive business in American flour, etc., in this country requires: (1) The conclusion of a treaty of commerce between Spain and the United States; (2) the establishment of one or more direct lines of steamers calling at all the principal Spanish ports; (3) the constant exhibition of American products and goods by samples, through the American

consulates, at the chambers of commerce where they are located; (4) good commercial travelers and agents.

Good commercial travelers are very important in the development of new business, and I would therefore recommend American producers to send such to this country, where a fair amount of business can be done.

This district is a very important market as regards the consumption of wheat flour. It is not, however, a wheat market, although some small parcels of American wheat and one or two whole cargoes direct from Russia are received here yearly for the use of the mills of this province. Still, the foreign wheat consumed here is of no real importance at the present time.

A large quantity of flour made from wheat received at the ports of Marseilles, Barcelona, and Tarragona from foreign countries, principally from Russia, is, however, sold in this district.

Both the flour made from hard and soft American wheat would find a good market here, provided prices would allow it to compete with other classes. Hard wheat, I understand, is most suitable to this market.

ALBERTO MOLINA,
Vice-Consul.

CARTHAGENA, *January 21, 1894.*

GRAO.

STANDARD OF LIVING.

The people of this district are ready to eat American flour if it can be had cheaper than the French or Hungarian flour or can compete with that produced from domestic, Russian, and the East Indian wheat.

IMPORTS OF FLOUR AND WHEAT.

The imported flour most used is that made from hard and soft wheat, and of these the lower or darker shaded grades are generally preferred to the whiter and finer qualities, which sell only in small quantities.

No American wheat flour was imported during 1891 and 1892. A small quantity (3,000 bags) was imported here in 1893 on trial; but, owing to the distance, no further orders have followed as yet. The convenient neighborhood of Marseilles facilitates operations in small quantities.

No American wheat was imported during the years under consideration.

Flour imported from other countries during the calendar years 1891, 1892, and 1893 amounted to 1,520,081, 1,522,680, and 199,087 kilograms, respectively. Wheat imported from other countries during the same years amounted to 15,104,377, 14,562,880, and 33,584,493 kilograms, respectively.

EXCHANGE AND SHIPPING FACILITIES.

Exchange should, under every circumstance, be made through approved bankers' credit on Paris or London.

There is no direct steamer communication between the United States and this port, and transshipments via Great Britain or France increase the prices.

OBSTACLES TO TRADE.

The principal obstacle is a want of direct steamship communication which would convey small quantities for the introduction of American products. Until these are better known here, American exporters might keep a certain stock of their goods in the Marseilles or Algiers docks to supply the Spanish demands.

THEODOR MERTENS,
Consular Agent.

GRAO, *January 23, 1894.*

MALAGA.

STANDARD OF LIVING.

The standard of living among the upper and middle classes is as high in this district as in any part of the world, while among the poorer classes it is probably lower than in many other countries.

In years when the Spanish wheat crop is small there is a much greater demand for American wheat than when the native crop is an average one, as the home-grown wheat is preferred to any other. Flour made from home-grown wheat is most generally used.

IMPORTS OF WHEAT AND WHEAT FLOUR.

Countries.	Wheat.		Flour in 1893.
	1891.	1893.	
	Tons.	*Tons.*	*Tons.*
United States	.....	1,300	.....
England	.....	15,445	141
France	.....	2,030	173
Morocco	14	2,273	.....
Total	14	20,048	314

NOTE.—There were no imports of wheat in 1892 and none of flour in 1891 and 1892.

The quantities of wheat and flour given as imported from England comprise about 80 to 90 per cent of American-grown wheat, the remainder being of Persian, Canadian, and Chilean growth.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are the same as in other European countries, payment for American imports being made by bills on London.

The facilities for shipment from the United States are very much restricted, there being no direct lines of steamers from the United States to this port. Most American goods arrive here via England.

OBSTACLES TO TRADE.

The obstacles to the extension of trade in American flour is the duty levied on all foreign-grown wheat and the present fluctuations in exchange.

TRADE OUTLOOK.

From personal investigation, I have come to the conclusion that American wheat flour is not in much demand in this market, though some is sold. Wheat flour from hard wheat is preferred. The consumption of flour is very great, especially among the classes who can not afford to eat beef or pork, and when it happens that native flour becomes scarce there is always a demand for foreign-grown wheat.

Formerly wheat from the United States was not much liked here, people being accustomed to hard wheat, but now they begin to find that the American wheat makes the bread light and fine; the article sells well.

The mills in this vicinity are not altogether adapted to grind American soft wheat, for which reason the American product is always mixed with Spanish hard wheat.

THOMAS R. GEARY,
Acting Consul.

MALAGA, *January 24, 1894.*

SANTANDER.

The people of the district are very poor. Bread made from Spanish maize is their principal food, although they are rapidly becoming accustomed to wheaten bread. The flour comes mostly from the neighboring districts of Castile.

Some wheat and flour are imported from France, Belgium, England, and the United States, but in very small quantities.

Exchange is usually effected through London.

Enough freight accommodation is offered by the Compañia Transatlantica from the United States; it is seldom accepted.

The obstacles in the way of the extension of trade in American flour in this district are the enormous number of mills for grinding wheat established here and their proximity to the producing centers of Spain.

FAUSTINO ADRIOZOLA,
Consular Agent.

SANTANDER, *February 2, 1894.*

MADRID.

Spanish wheat flour is exclusively used in this district. The high railway freight charges are obstacles in the way of the importation of foreign flour or wheat.

The great depreciation of Spanish currency would seem to render importation still more difficult, if not impossible. The peseta has fallen from 19.3 cents (its par value) to about 15 cents.

According to the data furnished by the officials of this city, the total quantity of wheat and wheat flour consumed in Madrid during the years 1889 to 1893, inclusive, was as follows: Wheat, 2,488,965 bushels; flour, 97,703,550 pounds.

I. FIGUEROA HERNANDEZ,
Vice-Consul.

MADRID, *March 30, 1894.*

SWEDEN AND NORWAY.

NORWAY.

STANDARD OF LIVING.

The bulk of the bread consumed in Norway is made of rye. The import of rye into this country amounted during the year 1892 to 252,945,000 pounds, and the receipts of rye flour were 47,025,000 pounds.

The general preference of the Norwegian people is for rye, instead of wheat, bread. Wheat is too costly for the general trade of the country, and its use is limited to a certain class of people, although the small difference in the price of rye and wheat during the last years has resulted in an increased demand for wheat. During the year 1890, when the harvest failed and Russia prohibited the export of rye, several shipments of American wheat flour were made to this country and profitably sold. Since then the import has constantly increased.

IMPORTS OF FLOUR AND WHEAT.

The reported imports of wheat flour into Norway during the calendar year 1892 were larger than in any previous year, amounting to 77,428,648 pounds, valued at $1,773,000, against 63,627,102 pounds, valued at $1,736,000, in 1891 and 48,138,826 pounds, valued at $1,150,000, in 1890. The statistics for the year 1893 have not yet been published.

According to the official Norwegian returns, the United States contributed to the extent of 10,835,528 pounds in 1892 and 7,221,148 pounds in 1891. These figures, however, do not give a correct estimate of the present flour trade between the two countries. It is impossible to give the exact import of wheat flour from the United States, because it is, as a rule, brought by steamers from the United States to Hamburg, and thence reshipped to this country. Consequently, the whole cargo is registered by the customs officers as German, although a large part of it may be American products. Very small quantities are carried by the two direct lines between New York and the southern part of Norway (the Scandia and the Thingvalla), as their freight charges are higher than shipments via Hamburg.

The import of wheat into this country in 1891 amounted to 26,786,474 pounds and in 1892 to 18,452,258 pounds, showing a diminution of 8,334,216 pounds. The direct import from the United States was 13,134,286 pounds in 1891 and 8,204,218 pounds in 1892.

DUTIES.

The import duty on wheat is 5.89 cents per 220 pounds and 34 cents per 220 pounds on wheat flour.

MONETARY EXCHANGE.

There are here large and solid bankers, who sell drafts on different commercial places in the United States and cash American drafts. American goods shipped to this country are, as a rule, paid by remitting money to London through bankers here.

OBSTACLES TO TRADE.

One of the principal disadvantages under which the American flour trade suffers is the long and irregular transport from the mills to the port of shipment in the United States. The flour shipped to this country from an inland town in the United States is always forwarded on a through bill of lading, acceptors of which are obliged to take all the risks. The railway companies are not bound by the bill of lading to send the flour by any particular train or vessel, and from two to three months often elapse before the Norwegian importers receive the flour, though their orders are always transmitted by cable to the mills.

When a buyer in Norway can not calculate within several months when he is likely to receive his flour, he often prefers to order German wheat, which reaches this country in about eight days.

GERH. GADE,
Consul.

CHRISTIANIA, *February 12, 1894.*

SWEDEN.

STANDARD OF LIVING.

Though the upper classes in this country have a high standard of living, the middle and lower classes are frugal and saving and pursue a plain and humble mode of living, their food consisting principally of bread, milk, and fish, with now and then a little meat. I can therefore safely say that bread constitutes the larger portion of the food used in Sweden.

In spite of the improvements made in farming here during late years, through importation of modern farm machinery and implements, the country can not produce wheat and rye enough to meet the home demand, and breadstuffs are very largely imported.

QUALITY OF FLOUR USED.

The flour mostly used here is rye flour, the majority of the people preferring rye bread. The bread supplied for the army, and, in a great measure, for the navy, is also made principally from rye flour. In 1891 the crops

failed in Russia and the Russian Government prohibited the export of rye, and Sweden had to turn to other countries for its supply of breadstuffs. In consequence of this prohibition the price of rye had advanced so as to make wheat cheaper, and the use of wheat flour became more common, and, as a result, the import of wheat increased considerably. This seems to have changed, however, in 1893, so that the import of rye exceeded that of wheat.

Of wheat flour three qualities are sold here. The middle grade is used the most, the best quality in comparatively small quantities and chiefly in the cities.

IMPORTS OF GRAIN AND FLOUR.

The following tables will show the import of rye, wheat, and flour during three years, according to the last complete statistics available. These statistics, however, are not quite reliable as to imports from the United States, as American products have been imported chiefly through English and German agents, and the statistics give only the name of the country from which the products are last imported. The largest portion of the wheat and flour imported from England and Germany is therefore, in all probability, American. Even some of the wheat bought in Denmark is no doubt American, and the wheat flour bought from that country is generally manufactured in Denmark from American wheat.

Imports of grain and flour into Sweden.

Whence imported.	1890.	1891.	1892.
Wheat.			
Russia and Finland ..... bushels...	548,753	489,385	409,539
Denmark ..... do.....	834,190	735,790	1,204,467
Germany ..... do.....	720,739	438,875	1,125,923
England ..... do.....	11,109	100,366	254,205
United States ..... do.....	.....	332,911	790,008
Other countries ..... do.....	742	639,312	564,887
Total ..... do.....	2,115,533	2,736,639	4,349,029
Wheat flour.			
Russia and Finland ..... pounds...	237,585	468,992	.....
Denmark ..... do.....	23,609,989	18,861,142	20,394,271
Germany ..... do.....	9,865,588	13,851,559	19,530,289
England ..... do.....	193,202	739,068	.....
United States ..... do.....	.....	.....	3,781
Other countries ..... do.....	272,218	444,606	8,181,494
Total ..... do.....	34,178,582	34,365,367	48,109,835
Rye.			
United States ..... bushels...	.....	22,726	224,375
Other countries ..... do.....	4,622,654	3,427,150	2,760,295
Total ..... do.....	4,622,654	3,449,876	2,984,670
Rye flour.			
United States ..... pounds...	.....	.....	.....
Other countries ..... do.....	28,544,572	22,393,921	25,898,646
Total ..... do.....	28,544,572	22,393,921	25,898,646

Total estimated imports into Sweden in 1893.

Wheat	bushels...	4,399,573
Rye	do.....	3,184,584
Wheat flour	pounds...	76,554,735
Rye flour	do.....	41,673,554

Imports into Gothenberg.

Description.	1891.	1892.	1893.
Wheat.....bushels...	305,621	403,290	473,275
Rye.....do.....	394,183	96,320	72,171
Wheat flour.....pounds...	9,944,911	14,318,471	20,990,680
Rye flour.....do.....	5,981,878	4,758,495	8,563,685

American wheat and flour are generally considered to be of good quality, and there is no objection to them except, perhaps, that they are too costly for the general trade of the country, where comparatively little white bread is used, as the consumption of this article is chiefly confined to the cities.

DUTIES.

The import duty on wheat, rye, and corn is 34½ cents, and on flour 67 cents, per 220 pounds. In 1888 the import duty on flour was raised to $1.15 per 220 pounds and on grain to 57½ cents per 120 pounds; but in 1892, when, owing to the short crops of 1891, Sweden was compelled to import more breadstuffs than usual, the duty was lowered to the present rates. In the Diet now assembled several voices have been heard advocating an increase in the import duty on breadstuffs to the rates of 1888, and it is hard to tell yet whether they will succeed or not, as the representatives from the cities form a solid party against such increase.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange is a subject on which volumes could be written. I understand that the credit system of this country is the main obstacle in the way of the extension of trade in American flour, as well as in all other articles. Merchants here are used to a longer and more extensive credit than is generally given by American traders. This custom of long credit is due to the low interest on money in Europe, and the constant refusal of American merchants to grant the time asked for by merchants here is no doubt due to the value of money in the United States. This, however, Swedish merchants are trying to remedy by opening bank credits in London or Hamburg, where interest is lower than in the United States. The American merchant under this new arrangement forwards to the London or Hamburg banker the evidences of the shipment of the goods, on receipt of which the draft is honored and charged to the Swedish purchaser, together with interest of 4 or 5 per cent for sixty or ninety days, as the case may be. American merchants, I am informed, have complained of the difficulty of obtaining information about the financial standing and responsibility of Swedish purchasers, and this has to a great extent been the reason why the

former in many instances have been careful in engaging in direct communication with this country. This state of affairs, however, is rapidly changing, as mercantile agencies are being established in all the larger cities in Sweden, to which American merchants can apply for information concerning any business man in the country.

The facilities for the exchange of money in Sweden are, as far as I can find, on a par with any other European country. The mode of exchange, however, varies greatly and is generally governed according to contract made between seller and purchaser.

There were no facilities for direct shipment from the United States to Gothenberg except by sailing vessels, until 1893, when a direct line of steamers—the Scandia line—was established between Stettin and New York, the steamers calling here twice a month on their trips between said ports.

OBSTACLES TO TRADE.

The absence of direct and regular steamship communication between the United States and this port has, in my opinion, been one obstacle in the way of the extension of trade in American wheat and flour in Sweden, as the transshipment, agent's charges, etc., have a tendency to increase the price of the product. Another impediment is that the American exporters have no representation here. Reliable agents, provided with samples and authority to sell, could no doubt improve the business in American wheat and flour here. This would nevertheless depend on the crops in Russia, as abundant crops in that country, with consequent low prices, would materially increase the import of rye, which would have a tendency to decrease the demand for wheat and wheat flour.

OTTO H. BOYESEN,
Consul.

GOTHENBERG, *February 20, 1894.*

STOCKHOLM.

From the information gathered, my opinion is that, when American wheat flour can be delivered here at less cost, however slight, to the consumer than the same grades obtainable elsewhere, the prospects are that a much more extensive business can be done in American wheat flour in this country.

The official statistics do not show the actual quantity of American flour that finds its way into Sweden; probably four times as much as the official statistics show is imported from the United States indirectly via England, Germany, and Denmark. The explanation is that the Swedish statistics credit to each foreign country those goods, and only those goods, that are exported directly to that country.

One of our largest dealers in the raw cereal says:

I have been watching the foreign flour trade, and, of course, could not help noticing the very considerable falling off in the imports as far as the United States are concerned. The imports of American flour were at first stimulated by the extra low quotations, lower than any miller in this country could have produced the flour for, and the trade gradually grew until last year there came, as it were, a collapse, the cause of which was the irregular deliveries, and the reason for these again was, in my opinion, that the trade had not been done direct with the millers, who would, of course, have kept up their standards, but through commission houses, who must have bought now of one, now of another miller, shipping everything under one common brand, quality well matched or not.

THOMAS B. O'NEIL,
Consul.

STOCKHOLM, *March 10, 1894.*

SWITZERLAND.

BERNE.

The standard of living in this district, as well as in the whole of Switzerland, is of the highest. American flour is not much used in the Berne district, on account of the peculiar forms of bread baked here, for which, I am informed, the American flour is not as well suited as that from other countries.

In the eastern and French cantons of Switzerland considerable American flour is consumed. White flour is most used.

As the statistics do not show the import of flour and wheat for districts, I give herewith a general table for all Switzerland for the years ending June 30, 1891, 1892, and 1893, in quintals of 220 pounds:

Kinds.	1891.	1892.	1893.
Wheat flour:	*Quintals.*	*Quintals.*	*Quintals.*
American	885	1,103	3,143
All other	232,479	154,866	252,361
Wheat:			
American	1,896	244,990	391,674
All other	3,413,360	2,881,179	3,067,497

The considerable difference between the imports, as above shown, in 1891 and 1892, as compared with 1893, is explained by the circumstance that only since February 1, 1892, have the countries of production of the imported goods been ascertained; prior to that date the country of the late exchange was taken as the country of origin.

Monetary exchange is at sixty days, with accepted draft, or cash with one per cent discount.

The most usual method of transportation from the United States is New York to Havre or Rotterdam and thence to Basle for any part of Switzerland.

To my knowledge or information, there exist no obstacles in the way of the extension of trade in American flour.

For doing a more extensive business in American flour in Switzerland, skillful agents should be sent here, whose duties would be to study the customs and conditions of the Swiss wheat and flour market and thereby gain a thorough knowledge of the wants of the customers.

JOHN E. HINNEN,
Vice-Consul.

BERNE, *January 10, 1894.*

GENEVA.

STANDARD OF LIVING.

The consular district of Geneva is composed principally of the two large cantons of Geneva and Vaud, with a population at present of about 400,000, against 344,621 in 1888. These are all French-speaking people, and the two cantons comprise the principal and most important part of what is known as French Switzerland. The standard of living in the two cantons is excellent—as good as, if not better than, anywhere else on the continent of Europe. The bread consumed by these people is made almost exclusively of wheat flour. Even the peasants are able to eat a tolerably fair quality of white bread, the wretched black bread of certain other European countries being almost entirely unknown here.

AMERICAN FLOUR.

Bakers claim that while from 100 kilograms of Russian, Roumanian, Hungarian, or other standard European flours they can produce 140 kilograms of bread, they can make only 130 kilograms from American flour. This, they say, is due to the fact that there is not as much gluten in American as in the European article, and that it is too starchy; that, therefore, they can not afford to use it unless it should be considerably less in price than the first quality of European flour, which it has never been in this market.

But there is another reason why the market for American flour can not be materially enlarged in Switzerland, or, more particularly, in this consular district. For the protection of the native or home millers a duty of 2 francs per 100 kilograms is imposed on flour imported from all other countries. Without going into the details of weights and measures, it may be stated that 100 kilograms are equal to a little more than a barrel and a quarter of flour, considering 196 pounds to the barrel, and that, according to the present rate of exchange, 2 francs are the equivalent of 39 American cents. Taking 196 pounds to the barrel, it may be easily calculated that a barrel of flour would pay a duty of 34.71 American cents. Thus, when it is considered that the import duty on wheat is only 6 cents per 100 kilograms, it appears that the Swiss miller is pretty well protected; so well, in fact, as to make the importation of flour almost prohibitive, while, on the other hand, nearly all the grain the Swiss millers use is brought from other countries. The import duty on all wheat is 30 centimes per 100 kilograms and 2 francs (or 39 cents) on all flour, except on French flour. Switzerland discriminates slightly against her republican neighbor and imposes a duty of 2.50 francs on French flour. For the reasons above set forth, there seems to be little prospect, at least for the present, of making a market for American flour in this consular district.

Nor does it appear that the market for American wheat in this district is susceptible of great enlargement. Millers say they are willing to buy Amer-

ican wheat when it is cheaper than Russian and Roumanian, but not often otherwise, and even then only in comparatively small quantities. They frequently use about 25 per cent of American wheat to mix in with the Russian or Roumanian grain, for the reason that the American admixture lends a white color to the flour. But they say they are not prepared at present to use American wheat exclusively, even under the most favorable conditions of price. This, they say, is for the reason that all the milling machinery of Switzerland is made for grinding the European grain, which is very much harder than the American article, and consequently the whole system would have to be changed before they could use American wheat excusively.

The favorite wheats of Swiss millers are Russian and Roumanian, although they use the product of Bulgaria and Servia in large quantities. Hungarian wheat is the highest in this market and is not being largely used at present. American wheat is quoted here generally at about the same price as Russian, which at present is worth, freight and duty paid, for first quality, 16½ to 17½ francs ($3.18 to $3.38) per 100 kilograms (220 pounds). It may be remarked, in this connection, that the present prices are lower than they have been before for many years.

Russian flour to-day is quoted here at 28 francs ($5.41) per 100 kilograms (220 pounds). American is quoted at 25 francs ($4.83), but I doubt whether a dozen barrels of genuine American flour could be found in the whole city of Geneva.

Switzerland consumes annually about 400,000,000 kilograms (14,700,000 bushels) of wheat. Of this all except about 5,000,000 kilograms (183,900 bushels) is imported. These figures are the estimates of intelligent Genevese millers and dealers; but they are only estimates, and I can not vouch for their accuracy.

There are in this consular district about twenty-five flour mills, some of which have a capacity of 30,000 kilograms (338 barrels) of flour per day. The two largest are at Geneva and Vevey.

QUALITY OF FLOUR USED.

The first quality of flour is most used in this district. A leading miller estimates it as follows: Sixty per cent first, 20 per cent second, and 20 per cent third quality.

The American wheat used here is what is known as No. 2.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange here are as good as in any other of the large European cities.

Nearly all flour and wheat shipped from the United States to southern France or Switzerland comes by ship directly to Marseilles and is thence transported overland to interior points. The facilities for shipping to this post may therefore be regarded as simple, direct, and excellent.

BENJ. H. RIDGELY,

GENEVA, *January 30, 1894.* *Consul.*

HORGEN.

INTRODUCTION.

No importing or wholesale houses, nor any large mills, being located in this consular district, and no report on the movements of trade in the same being available, I can furnish only such information and statistics as refer to the whole of Switzerland, and I am sorry to say that even in this regard the reports coming from different sources do not always agree with each other.

STANDARD OF LIVING.

The standard of living in this district, as in the larger part of Switzerland, is high, much higher than in some of the other European countries. The bread consumed here is almost exclusively made of wheat flour ranging from good to best qualities, rye and other kinds of grain being but rarely used for bread-making.

A good deal of the flour is milled from American wheat, but, as almost all the bread consumed is furnished by the bakeries, the people generally do not know of what flour their bread is made. I learn, however, that but very little, if any, purely American flour is used in baking.

IMPORTS OF AMERICAN FLOUR.

American flour is imported to a very limited extent and as a general thing, I understand, the American wheat is mixed with native wheat or wheat imported from Russia, Hungary, or other Danubian states, partly on account of the prevailing opinion that the product of the American grain, though highly esteemed for its fine, white, and glossy appearance, is inferior in nutritive qualities to the flour made of the more glutinous European wheats, especially those raised in Hungary, but perhaps principally because the trade in European wheats, under ordinary circumstances, is more profitable for the dealer. That the millers are a unit against the importation of American flour, and even against the use of flour made exclusively of American wheat, is a matter of course. The fact that the prices paid for Russian and American wheat in the principal Swiss markets are about the same at the present time, while only Hungarian wheat is quoted considerably higher, seems to demonstrate clearly that the dealers themselves and the millers do not believe in the superiority of Russian over American wheat. I find in the latest market reports the prices of Russian and American wheat quoted alike at 18 to 19½ francs ($3.47 to $3.76) per metric centner of 100 kilograms (220 pounds), or about 95 cents to $1.03 per bushel of 60 pounds, while best Hungarian wheat is quoted at 20 to 21.50 francs ($3.86 to $4.15) per metric centner, or about $1.05 to $1.13½ per bushel. The preference for Hungarian over American and Russian wheat seems well established, but Hungary is not the principal source of the wheat consumed here, the largest amount being supplied by Russia. As far as American wheats are concerned, I learn that the millers prefer the northern spring wheats to the red winter wheats of the Middle States.

The importation of wheat flour into Switzerland is, as already mentioned, very limited. According to the statistics at hand, in 1891, 1892, and 1893 there were imported 885, 1,654, and 4,239 metric centners, respectively, of American flour. It may be presumed that a good part of the flour imported from France and Germany is at least partly the product of American wheat.

The total import of flour (without distinction of the grain from which it was produced, but consisting chiefly of wheat flour) into Switzerland for the years ending June 30, 1891, 1892, and 1893, is reported as follows:

	Metric centners.
1891	233,364
1892	203,676
1893	255,475

France, Russia, Austria, Germany, and Italy were the principal sources of supply, as will be seen from the following statement of the import of flour of all kinds into Switzerland during the year ending June 30, 1893:

Countries.	Quantity.	Countries.	Quantity.
	Met. cent.		*Met. cent.*
France	82,132	United States	4,239
Russia	56,509	Other countries	1,422
Austria	42,385	Total	255,475
Germany	35,910		
Italy	32,878		

It may reasonably be presumed that the import from Italy consisted mainly of corn meal, which in the statistical report is not separately named.

The Statistical Year Book of Switzerland for 1893 gives the following prices of flour in the market of Berne for the year 1892, which, on an average, are higher than the prices realized last year and higher than at the present time:

Prices of wheat flour per metric centner at Berne during the year 1892.

Year.	Superfine.	No. 1.	No. 2.	No. 3.
January	$8.49	$8.11	$7.72	$7.33
February	8.11	7.91	7.53	6.95
March	8.01	7.62	7.24	6.27
April	8.01	7.62	7.24	6.27
May	8.11	7.53	7.14	6.18
June	7.91	7.33	6.95	6.18
July	7.91	7.33	6.95	6.18
August	7.91	7.33	6.95	6.18
September	7.72	7.14	6.75	5.79
October	7.33	6.95	6.08	5.11
November	7.33	6.85	6.08	5.11
December	7.14	6.66	6.08	4.92
Average	7.83	7.36½	6.89	6.04

The price of American wheat flour I have never seen quoted in the market reports of Switzerland, which shows that, if it comes into market

unmixed at all, it is not sold under its proper designation. The flour generally sold and used here for bread-making is at present quoted at 32 francs ($6.17) per metric centner (220 pounds), or 2.8 cents per pound.

In addition to the wheat flour, there were imported in 1892 from the United States 9,453 metric centners and in the first six months of 1893 about 2,800 metric centners of hulled and crushed leguminous grain, grit, oatmeal, corn meal, farina, etc., at an average value of about 33.50 francs ($6.47) per metric centner.

IMPORTS OF AMERICAN WHEAT.

The whole production of wheat in this country amounts, on an average, to about 1,000,000 metric centners, or 3,666,000 bushels, while over 3,000,000 metric centners, or 11,000,000 bushels, are imported from other countries, principally Russia, Austria-Hungary, other Danubian countries, and the United States.

The bulk of the wheat imported from the United States comes through Germany by the way of Mannheim, the head of navigation of the Rhine, and the principal grain market in Germany. Occasionally there is a contract made for a cargo of grain through the London Grain Trade Association, but as a general thing the importation of cereals from the United States is effected through the medium of commission houses at Mannheim.

Up to 1892 all the grain that found its way from the United States to Switzerland through Germany was declared and figured in the statistical reports as the import of Germany, and it is only since the 1st of January, 1892, that, according to a decree of the Swiss authorities, in declaration of imports the country of production must be stated. Consequently the statistics previous to 1892 leave us in the dark as to the actual importation of American grain into Switzerland, but, subtracting the average importations from Germany since 1892 from the importations reported previous to that time, we get a fair estimate of the American wheat imported into this country during the years 1891 and 1892, while for the year 1893 we have the actual import, as follows:

Year ending June 30—	Quantity.	
	Met. cent.	*Bushels.*
1891 (estimated)	369,400	1,354,466
1892 (estimated)	550,200	2,017,400
1893 (actual)	391,873	1,436,867

During the same periods there were imported into Switzerland from other countries the following:

From—	1890–'91.		1891–'92.		1892–'93.	
	Met. cent.	*Bushels.*	*Met. cent.*	*Bushels.*	*Met. cent.*	*Bushels.*
Russia	1,298,727	4,761,999	1,667,977	6,115,916	2,263,383	8,298,851
Austria-Hungary	1,342,394	4,922,111	444,073	1,628,268	540,433	1,981,587
Lower Danubian states	243,523	892,917	250,050	916,850	220,813	809,647

The importations from France, Germany, Turkey, and other countries in the same period amounted in the aggregate to not more than about 60,000 metric centners, or 220,000 bushels, per annum.

The statistical compilations in Switzerland are generally made for the calendar year, and since the reports, as mentioned above, are more accurate and specific since the 1st of January, 1892, a reproduction of the same as to the importation of wheat may be of interest. I copy the following table from the report of the customs department of Switzerland:

Importation of wheat into Switzerland in 1892 and the first six months of 1893.

From—	1892.		Six months of 1893.	
	Met. cent.	*Bushels.*	*Met. cent.*	*Bushels.*
Russia	1,891,705	6,936,251	999,715	3,665,622
United States	425,555	1,560,368	205,508	753,529
Austria	402,420	1,475,540	260,165	953,938
Lower Danubian states	300,681	1,102,497	62,537	229,303
European Turkey	22,011	80,707	5,799	21,263
France	12,530	45,943	3,207	11,759
Other countries	25,542	93,654	19,142	70,187
Total	3,080,444	11,294,960	1,556,073	5,705,601

PRICES OF HUNGARIAN, AMERICAN, AND RUSSIAN WHEAT.

The price of Russian and American wheat is substantially the same in the markets of Switzerland, as already mentioned, but the Hungarian always brings a higher price, as will appear from the following quotations at the Zurich Grain Exchange for the year 1892:

Average monthly quotations of Hungarian and American wheat during the year 1892 (per bushel).

Month.	Hungarian.	American.
January	$1.55	$1.42
February	1.51	1.42
March	1.50	1.39
April	1.43	1.30
May	1.40	1.29
June	1.36	1.25
July	1.29	1.18
August	1.26	1.17
September	1.21	1.10
October	1.21	1.10
November	1.18	1.08
December	1.18	1.06
Average	1.34	1.23

EXCHANGE FACILITIES.

Monetary exchange is effected through the medium of banks of exchange, the same as in the United States. Contracts are generally closed in the

currency of this country (francs) and payments made by draft on Paris or Mannheim (Germany) at the regular rate of exchange.

SHIPPING FACILITIES.

Facilities for shipping are ample and favorable for direct trade between the two countries. Shipments can be made from any American port by sailing vessel or steamer to Havre or other French ports on the Atlantic coast, thence by rail to place of destination; or to Antwerp or Rotterdam by vessel, thence by river boat to Mannheim and by rail to place of destination; or by vessel to Genoa (Italy) and from there by rail to Switzerland. The rate of freight by steamer to Havre is about 8 cents per 100 pounds of grain and 80 cents per barrel of flour; from New York or Baltimore to Antwerp or Rotterdam from 5½ to 6 cents per bushel of wheat and from 24 to 36 cents per barrel of flour.

OBSTACLES TO TRADE.

The obstacles in the way of the extension of trade in American flour are:

(1) The import duty of 2.50 francs (48.25 cents) per metric centner (220 pounds) of flour, while the duty on wheat is only 5.8 cents on the same weight of grain, or 1.6 cents per bushel. This discrimination, I suppose, is made solely in the interest of the millers of this country and accounts mainly for the insignificant importation of the milled product in comparison with the importation of the grain.*

(2) The prejudice of the people against the use of American flour. The opinion that the bread made of the American flour lacks the nutritive qualities and pleasant flavor of the bread made of the flour of Russian and Hungarian production seems to be generally prevalent, being nursed by millers and bakers, although, they admit the fine quality and appearance of the flour of American production. Whether this prejudice is justified or not, I am not able to judge, but it is possible that the American flour requires a different treatment from other flour in use here, and that the bakers have not yet learned how to handle it. The principal objection, however, seems to come from the millers, some of whom even go so far as to deny that they grind any American grain, while others admit that they use it in mixture with native wheat or wheat from Russia and the Danubian countries.

The best way to counteract this opposition, remove this prejudice, and extend the sale of American flour and wheat would probably be the establishment of agencies in the principal cities of Switzerland for the purpose of demonstrating the fact that just as good bread can be made of American flour as of the flour of any other country. The Industrial Cantonal Exposition, which will be held at Zurich from the 15th of June to the 15th of October of this year (1894), the Agricultural Exposition at Berne in 1895, and the Federal Exposition at Geneva in 1896, will furnish excellent opportunities for this purpose, which should not be neglected by those interested in the flour and grain trade of the United States. The people from all parts of the country will

*See also p. 331.

visit one or more of these expositions, and, as the inhabitants of Switzerland are generally intelligent and know a good thing when they see it, it may reasonably be presumed that such establishments, under judicious care and management, would have the most beneficial results.

WM. F. KEMMLER,
Consul.

HORGEN, *January 31, 1894.*

ST. GALL.

STANDARD OF LIVING.

The standard of living in this consular district (comprising the cantons of St. Gall, Thurgau, Appenzell, and Graubünden) is, so far at least as wheat flour is concerned, of the highest. It is claimed by the millers here that American flour, while white and well appearing, lacks the nutritious qualities of flour obtained from the Hungarian wheat. There is undoubtedly in this district some prejudice against American flour. Only the best qualities of flour are used here.

AMERICAN FLOUR AND WHEAT.

It can not be definitely ascertained from statistics covering this special district whether any American flour was imported during the years 1891 and 1892; the statistics for 1893 are not yet published.

The imports of American wheat into this district amounted to 441 pounds and 35,400 pounds in 1891 and 1892, respectively; the statistics for 1893 are not available.

From other countries wheat flour was imported into this district as per the following table:

Whence imported.	1890.	1891.	1892.	Total.
	Kilograms.	*Kilograms.*	*Kilograms.*	*Kilograms.*
Austria-Hungary	1,600	2,000	1,500	5,100
Bavaria	1,400	1,200	700	3,300
Baden	100	264	600	964
France	.....	100	710	810
Würtemberg	.....	350	136	486
Italy	.....	400	225	625
Total	3,100	4,314	3,871	11,285
In English pounds	6,834	9,510	8,534	24,879

From other countries wheat, corn, and barley (wheat can not be given alone) were imported into this district as per the following table:

Whence imported.	1890.	1891.	1892.	Total.
	Kilograms.	*Kilograms.*	*Kilograms.*	*Kilograms.*
Austria-Hungary	218,950	157,500	104,000	480,450
Russia and Roumania	61,000	86,804	66,525	214,329
Servia	3,100	700	.....	3,800
Würtemberg	.....	100	.....	100
Total	283,050	245,104	170,525	698,679
In English pounds	624,012	540,356	375,939	1,540,308

DUTIES.

The import duty on American flour is 2 francs (38.6 cents) per 100 kilograms (220 pounds). The import duty on American wheat is 30 centimes (6 cents) per 100 kilograms. The import duty on wheat flour from other countries is the same as on that from the United States, except that French wheat flour is compelled to pay a duty per 100 kilograms of 2.50 francs (47 cents). This is by way of retaliation for the high French duties against Swiss products. The import duty on wheat from other countries is the same as on that from the United States.

EXCHANGE FACILITIES.

The facilities for monetary exchange here are good. Excellent banks exist everywhere in the district. The ordinary rate of exchange on New York is one-fourth of one per cent. It is suggested that arrangements might be made for direct payment to the American wheat-exporters through the Swiss embroidery houses, which are numerously represented in New York, thus avoiding the troubles of remittance and exchange.

FREIGHT RATES.

American wheat flour and wheat are imported into Switzerland via Antwerp and Rotterdam; none via any other port. The freight rates are as follows per 1,000 kilograms (2,204 pounds) from Antwerp and Rotterdam to points in Switzerland:

To—	From Antwerp.		From Rotterdam.	
	Wheat flour.	Wheat.	Wheat flour.	Wheat.
Basle	$5.52	$4.46	$6.63	$5.27
Olten	6.39	5.39	7.56	6.20
Berne	6.68	6.70	9.10	6.70
Romanshorn	6.92	5.68	8.03	6.23
Zurich	7.05	5.97	8.16	6.56
St. Gall	7.84	6.34	8.65	6.89
Geneva	12.06	7.69	13.18	7.72
Rorschach	7.24	5.98	8.33	6.55

OBSTACLES TO TRADE.

Hungarian flour is flooding the market in this district. It is of good quality and very cheap. The actual present price of wheat per 100 kilograms (220 pounds) is 17 to 19 francs ($3.28 to $3.67), with a reduction expected. The business is now dull in consequence. It is dull also for the reason that the embroidery and other trade with the United States is stagnant, and the laboring classes here are eating corn bread and potatoes in lieu of wheat bread. The general stagnation of trade with the United States arises from the depression in business in the United States, which has been so marked a feature of the past six months. Besides the foregoing obstacles to American trade in wheat and flour with Switzerland, there is the further one of freight rates. American wheat and flour come here via Antwerp and Rotterdam, involving both an ocean freight and a car freight.

TRADE OUTLOOK.

The prospects now are not of the brightest for extending the sale of American flour, at least in this district. This for the reasons stated in the answer last above. Other parts of Switzerland may not be subjected to these obstacles to the same extent. It is further suggested that possibly shipments of wheat and flour via Genoa might have some advantages in car freights over shipments via Rotterdam and Antwerp, although the fact is that at present no shipments from America are thus made.

THE SWISS GRAIN TRADE.

The following is a summary of an article on the Swiss grain trade of 1893, contributed by a leading grain dealer to the Zurich Zeitung for January 10, 1894:

The Swiss grain yield for 1893 was medium in respect to quantity and quality. Taking 100 as representing a full yield, the yield for 1893 may be stated as follows: Wheat, 85 per cent, or 800,000 metric centners;* rye, 80 per cent, or 435,000 metric centners; oats, 70 per cent, or 420,000 metric centners. The total value of the yield was 30,000,000 francs ($5,790,000). There were imported into Switzerland of the above kinds of grain about 4,500,000 metric centners, valued at 90,000,000 francs ($17,370,000). During the first six months of 1893 much American wheat came to Europe and prices kept dropping. Reports from the United States received about May 1, 1893, were that the coming crop probably would be short. In Europe at the same time there was great lack of rain. Prices therefore advanced. But the reports from America proving exaggerated, prices again fell. The Russian grain tariff difficulty with Germany came on about August 1, 1893. In consequence, German holders of Russian wheat sold it to Switzerland at almost any price. In addition to this, by reason of the monetary crisis in the United States, American wheat sold here for prices so low as to be without parallel. During all this period, however, Hungarian wheat sold in eastern Switzerland at fair prices. This was because (1) the Hungarian crop was light, and (2) because eastern Switzerland prefers Hungarian wheat to any other.

At the close of 1893 the stock of wheat in the elevators at Buchs, Romanshorn, and Rorschach (Buchs is in the Rhine Valley near Austria and Romanshorn and Rorschach on

* 1 metric centner = 220.46 English pounds.

the Lake of Constance) was not large—perhaps some 600 cars—while in Brunnen, Morges, and Geneva there were some 5,000 cars. It is not thought that the trade will soon improve, as it is not controlled by sufficient capital. During the depression of 1893 the milling business of eastern Switzerland was good. The warehouses were full, and millers were not required to carry large stocks. In eastern Switzerland flour prices, as compared with wheat prices, were very good. Foreign wheat still seeks our market in enormous quantities; the competition therein is therefore great and the prices ruinous.

IRVING B. RICHMAN,
Consul-General.

ST. GALL, *January 18, 1894.*

BASLE.

STANDARD OF LIVING.

The standard of living in this district is certainly as high as the average for Switzerland in general, since it embraces cities of considerable size and great wealth, like Basle and Neufchatel. The general standard for Switzerland, as determined by the consumption of wheat per head, is higher than that of any other European country except France. This is shown by the following table, published in the last report of the Swiss Society of Commerce and Industry. The quantity consumed annually by each inhabitant is:

Country.	Quantity.	Country.	Quantity.
	Pounds.		*Pounds.*
France	705	Turkey	247
Switzerland	418	Roumania	220
Spain	413	Austria	187
Belgium	378	Portugal	176
Hungary	361	Denmark	165
United States	357	Germany	143
England	352	Servia	120
Italy	310	Russia	99
Holland	283	Sweden and Norway	66

It must be said that for the present at least the people of this part of Switzerland are ready to eat American flour only in case of its being obtainable at prices considerably lower than are demanded for flour of European origin.

QUALITY OF FLOUR USED.

In all western Switzerland the people have the same decided preference for Russian wheat which their compatriots in the eastern part of the country show for Hungarian wheat. The flour consumed in this district is furnished by the local millers, who import Russian grain almost exclusively. It is imported from Odessa and other Black Sea ports by way of Antwerp or Holland, thence by the Rhine to Mannheim, and by rail to Basle.

The reason of the preference for Russian wheat flour is the prevalent belief that it is richer and contains a larger proportion of gluten than the

American product. The people have formed a habit in this matter which the bakers feel obliged to respect. It is furthermore alleged that the lack of large storehouses prevents the bakers from introducing American flour for the purpose of mixing it with the product of the local mills, even when it can be imported at a very moderate price, and that repeated attempts of this kind in former years have resulted in failure. It is found more convenient for the bakers to supply their immediate wants by daily or weekly recourse to the local flour mills than to import carloads of flour, which are not easily handled, in consequence of lack of room in the railroad freight depots.

IMPORTS OF FLOUR AND WHEAT.

The consular district of Basle constitutes no definite geographical or administrative division of the country, and it is therefore impossible to determine even approximately the quantity of American wheat and flour imported here during a given year. In any event it must be very small. For each of the years 1890–'93, inclusive, the total importation of wheat into Switzerland was uniformly about 11,500,000 bushels, or almost exactly three-fourths of the whole quantity consumed. Of this quantity only 28,145 bushels in 1891, 1,500,000 bushels in 1892, and 1,000,000 bushels to September, 1893, are reported by the customs authorities as coming from the United States. I am informed by dealers, however, that considerably more of the wheat coming up the Rhine may be of American origin than is indicated by the official tables.

During the same years the United States furnished Switzerland with only 885 barrels of flour and meal of all kinds in 1890, with 6,104 barrels in 1891, and 734 barrels to September, 1893. The total annual importation of flour and meal from all countries does not differ materially from 260,000 barrels.

TRADE OUTLOOK.

The milling interest is one of the largest and strongest in Switzerland, and it is claimed that the mills are technically the best equipped in Europe, if not in the world. So long as economical and other reasons make it seem desirable to maintain this industry in its present or a higher stage of development, it will be extremely difficult to introduce American or other flour in large quantities. The above statistics show that the Swiss in general import at least ten times as much wheat as flour. The proportion of wheat is probably much greater, for the 260,000 barrels above given include all kinds of meal from cereals. Meantime American wheat can be introduced in much larger quantities by offering it at considerably lower prices than those paid for wheat of European growth or by demonstrating that the quality of the latter does not justify the preference which it enjoys.

GEORGE GIFFORD,
Consul.

BASLE, *March 7, 1894.*

ZURICH.

STANDARD OF LIVING.

The standard of living in Switzerland, and particularly in this consular district, is good. Bread made from wheat flour is one of the principal articles of food.

IMPORTS OF FLOUR AND WHEAT.

No statistics of the imports and consumption of American wheat flour are obtainable for this particular consular district. The federal custom-house gives the entire imports into Switzerland.

American wheat flour is not well known as such. There is no doubt, however, that it is being brought into this country quite extensively to be mixed with the home product for baking purposes, but it is sold as of European production. To check this practice American agencies should be established and the flour sold direct to bakers as American wheat flour. I am satisfied that after proper trials the sale of American wheat flour could thus be materially increased.

There is hardly any wheat raised in Switzerland. Most of that consumed is imported from other European countries and ground by the different local mills. Bakers in making bread use two qualities of flour, as shown by the samples I forward with this report to the Department.* These are known as No. 2 and No. 3 and are mixed for baking bread in the proportion of two-thirds of No. 2 and one-third of No. 3. A still higher grade of flour—No. 1—of the very best kind, is sold for family use and consumed in the preparation of articles of pastry, puddings, etc.

The following table will show the importation of flour from different countries (including the amount that the United States get real credit for) into Switzerland from the year 1855 to and including the year ending December 31, 1888:

Year.	Quantity.	Year.	Quantity.
	*Tons.**		*Tons.**
1855-'64 (average imports per annum)	15,687	1886	30,631
1865-'74 (average imports per annum)	16,252	1887	30,441
1875-'84 (average imports per annum)	25,849	1888	30,851
1885	30,239		

* 2,204.6 pounds.

This was at a cost of 32 to 56 francs per 100 kilograms.

The import into Switzerland of wheat flour from all sources, as per custom-house statistics, was as follows: In 1889, 22,805 tons; 1890, 21,023 tons;

* Samples filed in the Department.

1891, 23,041 tons; 1892, 23,902 tons. From the United States it was: In 1889, none; 1890, 59 tons; 1891, 76 tons; 1892, 528 tons.

The population of Switzerland, as per latest census, is nearly 3,000,000.

As per Furrer's Volkswirthschaftliches Lexikon, there were in Switzerland in 1887 in full operation 2,400 commercial flouring mills and 800 peasant or custom mills. At the latter mills any farmer can take small quantities of wheat or other grain and get it ground. The amount invested in all of said mills represents a capital of 150,000,000 francs, or $50,000,000,* and a combined horse power of 25,000. They employ 8,000 people and 6,000 horses and grind up 4,500,000 metric quintals, or 450,000 tons (of 2,204.6 pounds avoirdupois each), of grain of all descriptions; but all this is not quite sufficient to cover the demand of the Swiss people.

The following table will show the importation into Switzerland of wheat from different sources for the calendar year 1892, later statistics being unobtainable (the report for 1893 importation will be ready in July next):

Countries.	Quantity.	Value.
	Tons.	*Francs.*
Russia	189,170	44,455,000
United States	42,556	10,001,000
Austria	40,242	9,457,000
Danube countries	30,068	7,066,000
Turkey	2,201	517,000
France	1,253	294,000
Other countries	2,554	600,000
Total	308,044	*72,390,000

*$13,971,270.

DUTIES.

The United States being one of the most-favored nations, the import duty on American wheat and flour is the same as that laid on similar importations from Germany, Austria, Italy, etc., viz: Flour of all kinds, 2 francs per 100 kilograms; wheat, 30 centimes per 100 kilograms, as against 2.50 francs per 100 kilograms for wheat imported from France, there being no treaty with that country.

EXCHANGE AND SHIPPING FACILITIES.

The banking facilities in Switzerland are excellent, large capital being invested in banking institutions. Money can be borrowed on approved securities or commercial paper at from 3 to 4 per cent per annum. The principal banking houses have direct correspondence with the United States, and American exchange is easy to negotiate advantageously.

Switzerland being an inland country, no direct communication exists between this country and the United States. Goods have to be shipped to Antwerp, Havre, Marseilles, Bremen, Hamburg, Rotterdam, or Genoa, and

*As given by the consul. If the reduction into dollars is correct, the amount in francs should have been $50,000,000 in round numbers.

from any of these points forwarded by rail via Basle, Geneva, or the St. Gothard.

As will be seen by the above, there is room for American wheat flour if our people will take the trouble to send energetic representatives to Switzerland to push it.

EUGENE GERMAIN,
Consul.

ZURICH, *March 5, 1894.*

HORGEN.

In my report of January 31 I stated the Swiss tariff on wheat flour to be 2.50 francs (48.25 cents) per metric centner (220 pounds).* This is the rate of duty imposed on flour by the general tariff law of Switzerland. I have found, however, that the imports from the United States, under the most-favored-nation clause (articles 8, 9, and 10 of the treaty of November 25, 1850), are entitled to the benefit of the conventional duty established by special treaties with different countries, which, on flour, is 2 francs (38.6 cents) per metric centner, instead of the general rate of 2.50 francs. Although this difference does not affect the main points of, or in any way alter the results and conclusions arrived at in, my report, I consider it my duty to make this correction.

WM. F. KEMMLER,
Consul.

HORGEN, *March 28, 1894.*

*See p. 323.

TURKEY IN EUROPE.

DARDANELLES.

STANDARD OF LIVING.

The population of the province of Biga, of which Dardanelles is the chief town, is estimated at from 150,000 to 200,000 inhabitants. It is essentially agricultural, the peasantry growing their own bread crops of wheat, barley, rye, and corn. The grain is ground at the primitive water and wind mills, and bread is made of the cereals in varying proportions. It is the general custom for each household to make its own bread. Steam flour mills have been established in this town and in several of the larger villages where wheaten bread is used.

QUALITY OF FLOUR USED.

The varieties of hard wheat are milled, which, although not producing white bread, contain a large amount of semolina and are very nutritive.

IMPORTS OF FLOUR AND WHEAT.

On applying to the customs for statistics of imports of flour and wheat, I was informed they could not be furnished, as they did not make them for their own department. The merchants whom I next addressed gave the quantities of flour imported in the years 1891, 1892, and 1893 at about 10,000 sacks annually; the sack of 75 okes is equal to 201½ pounds, so the annual importation is about 2,000,000 pounds of soft wheat flour. The flour imported arrives almost exclusively from Roumania, and from Turkey, Russia, and France in small quantities. Roumania flour—Braila No. 3—is quoted to-day at $3.20 to $3.24 per sack of 201½ pounds and No. 4 at $3.02 to $3.05.

EXCHANGE AND SHIPPING FACILITIES.

Paper on most European countries can be negotiated, but with difficulty in the United States.

Conveyance of goods at through rates from the United States to the Dardanelles is made by the steamers of the French Messageries Maritimes, the Fraissinet, and the Italian Florio Rubattino companies.

TRADE OUTLOOK.

The question of the successful importation of American flour depends on price and quality. To test the question of its practicability it would have to be proven to the importer, but he would not take the initiative. Not a single barrel of American flour, so far as I can learn, has ever been imported here, and the imports of American grain are nearly nil.

FRANK CALVERT,
Consular Agent.

DARDANELLES, *February 13, 1894.*

CONSTANTINOPLE.

STANDARD OF LIVING.

The standard of living in this district is very different from that which prevails in western Europe, especially among the natives of the middle and lower classes, who generally use common or brown bread made from a low grade of wheat flour manufactured at the home mills, and sold very cheap. There is no rye flour used here. They eat fish, but eat little flesh meat, living chiefly on rice and vegetables, the latter being produced in great variety. The foreigners and natives of the higher class imitate the standard of living in western Europe as much as the markets will permit. These use the higher grades of flour, and would gladly use American flour if the price permitted its sale in this market.

QUALITY OF FLOUR USED.

Only a very small amount of bread made from first-quality flour is used by the lower classes in this part of the Turkish Empire, and even the middle classes use flour made largely from an inferior quality of wheat. Most of the flour used is manufactured at the native mills, and is of the first and second grades. Very little of this is made by the "roller process," as these improved mills have not come into general use in Turkey. The best grade of flour used here is imported principally from Russia and Roumania.

IMPORTS OF FLOUR AND WHEAT.

There was no American wheat flour imported into this district during the years 1891, 1892, and 1893.

The importations of wheat flour and wheat from other countries during the Turkish fiscal years ending March 13, 1890, 1891, and 1892, were as follows:

Year ending March 13—	Wheat flour.	Wheat.
	Barrels.	*Bushels.*
1890	412,848	1,706,902
1891	472,824	1,209,358
1892	541,206	602,448

The official figures for 1893 are not obtainable, but estimates by dealers place the importation of flour at 360,000 barrels, and of wheat at 500,000 bushels.

DUTIES.

The import duty in the Turkish Empire is 8 per cent ad valorem on all articles imported, except agricultural implements, which are free.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange with the United States are not as good as with the European countries. It is difficult to negotiate exchange on the United States without paying a high premium.

The shipping facilities from the United States are very unfavorable. There being no direct line of steamers, all goods must be transshipped, which causes delay and increases the charges for freight.

OBSTACLES TO TRADE.

In addition to the increased cost of freight and exchange, as compared with European countries, the prices are such as to preclude the sale of either American wheat or flour in this market. Wheat is now selling in this city at from 57 to 70 cents per bushel, and flour from $2.83 to $4.24 per barrel. These prices, which include the duty, do not greatly differ from those of the Chicago market, as reported in the American newspapers.

From the grain dealers here I learn that the price of wheat is now much lower than in former years. This is largely due to the new railroad to the interior of Asiatic Turkey, and to the abolition of the 8 per cent ad valorem duty formerly charged on articles shipped from one province to another. Now, wheat from any part of the Turkish Empire can be shipped to Constantinople without paying duty. The want of American commercial agencies in this country is also another serious hindrance to the introduction of American wheat and flour, as well as all other American goods.

TRADE OUTLOOK.

From the facts already stated there appears no good reason to indulge the hope of introducing American wheat flour into this district.

LUTHER SHORT,
Consul-General.

CONSTANTINOPLE, *March 20, 1894.*

THE UNITED KINGDOM.

BIRMINGHAM.

The standard of living in this district of England (known as the Midlands) is probably higher, on the average, than among any other like number of people in the United Kingdom. Owing to the fact that the district contains only one large city, there is probably less than the average amount of poverty, that is, of persons not able by their labor to procure the necessaries of life in fair measure. The district is one with a great variety of industries and, as a consequence, is less subject to severe financial depression than the average. Although it is a center for so many manufacturing industries, agriculture is still more important, relatively, than in any other part of England containing the same number of people.

It is, of course, impossible to separate the entire food consumption of the district from that of the whole of England or even to ascertain, with anything like accuracy, its relative amount; but, as it produces more than its share of wheat according to population, it is naturally less dependent upon imported wheat and flour for its supply of bread. During the continuance of the tax on grain of all kinds wheaten bread was considered something of a luxury among certain portions of the working population, whether artisan or agricultural. At that time black bread, made mainly from rye or beans, was the food of a large number of people. But the removal of the tax changed all that, until the people of England have reached what may be termed the white-bread standard. One sees very little rye bread or black or mixed breads of any sort in the shops, and, as the use of meat is not perhaps so large among these elements of the population as it is among the same kind of workers in the United States, the workingmen of England have come more and more to use bread made from wheat flour. It has been estimated by competent authorities that the per capita consumption of wheat and wheat flour in the United Kingdom increased from about 311 pounds in 1850 to 340 pounds in 1880.

The total imports of flour into the United Kingdom have increased by about 39 per cent during the four-year period [*sic*], while the amount received from the United States has increased by 79.1 per cent. There is thus manifest a tendency to import more of the breadstuffs in the form of flour ready for consumption, a fact which has had a depressing effect upon the milling industry in general throughout England. There is no remaining prejudice against flour from the United States, and many brands have acquired here the same popularity that they have long enjoyed at home.

Not only are there no apparent obstacles to the sale of wheat and flour produced in the United States, but, on the contrary, there is a growing dependence upon us for breadstuffs by the people of the United Kingdom. It is not easy to see how the conditions that produce this result are to be changed. Unfriendly trade legislation might have some effect temporarily, and before the relations of the two countries had readjusted themselves to radical changes; but a single bad crop all over Europe would even then do much to counteract such conditions. A nation trading with all the world, as does the United Kingdom, is not likely to ask where its breadstuffs come from in a year of failure or when its own production is constantly diminishing. Of course, it must be evident that unfriendly legislation—a failure to recognize the universality of the law that in order to sell we must buy—would have a tendency to restrict our selling to times of necessity and thus to make the demand more fitful and uncertain than it would be if there was less interference with fairly established trade relations.

Nothing seems to be more completely established than the dependence of the people of Great Britain upon the United States for a considerable part of their supply of breadstuffs, and this dependence is far more likely to increase than to diminish.

Owing to the fact that the metes and bounds of consular districts are not fixed, it is somewhat difficult to give accurate returns, especially when the district is located in the interior, and so makes no direct importations. In general, the Birmingham district draws its business from the counties of Hereford, Huntingdon, Leicester, Northampton, Oxford, Salop, Stafford, Warwick, and Worcester. Some points in these counties would naturally transact business relating to the United States at other consulates, but these would be balanced by places in a considerable portion of Wales and in other English counties that would naturally come here; so that for statistical purposes it will be approximately correct to take these counties as the district, and to assume that the number of people in them is the number fairly tributary to the Birmingham consulate and its agencies.

The population of these counties by the census of 1891 was 2,786,261, or about one-tenth of the population of England alone and a fraction less than one-fourteenth of the entire population of the United Kingdom.

The area of England is 32,527,070 acres; that of the district 5,019,595 acres.

The acreage of wheat in Great Britain for the period from 1889–'93 is shown by the following table:

Division.	1889.	1890.	1891.	1892.	1893.
	Acres.	*Acres.*	*Acres.*	*Acres.*	*Acres.*
England	2,321,504	2,255,694	2,192,393	2,102,969	1,798,869
Wales	68,464	68,669	61,590	55,278	54,562
Scotland	59,386	61,973	53,294	61,591	44,093
Total	2,449,354	2,386,336	2,307,277	2,219,838	1,897,524

The acreage of wheat in the Birmingham district by counties, and the population of each for the years 1889–'92 (the returns for 1893 by counties not being yet available), were as follows:

Counties.	Population.	Area.			
		1889.	1890.	1891.	1892.
		Acres.	*Acres.*	*Acres.*	*Acres.*
Hereford	113,391	38,346	36,938	34,606	30,854
Huntingdon	50,290	37,122	37,739	37,344	35,806
Leicester	189,607	27,974	28,138	27,804	24,220
Northampton	308,149	55,814	55,871	54,300	51,988
Oxford	94,143	48,166	45,923	44,732	42,880
Salop	254,745	51,828	50,037	47,227	42,931
Stafford	551,661	33,438	30,689	28,686	26,460
Warwick	801,760	47,030	46,095	44,036	41,729
Worcester	422,515	44,304	43,186	41,145	38,279
Total	2,786,261	384,022	374,616	359,880	335,147

It will be seen that while the area for England was 2,102,969 acres in 1892 and the average for the four-year period was 2,340,701 acres, the area sown to wheat in this consular district for the same year was 335,147 acres and the average for the period was 363,416 acres.

The total production of wheat in Great Britain for the period 1889–'93 and in the district by counties for the period 1889–'92 is shown by the following tables:

Production of wheat in Great Britain.

Division.	1889.	1890.	1891.	1892.	1893.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
England	69,336,374	69,442,417	68,694,456	55,107,186	46,429,407
Wales	1,672,557	1,712,541	1,461,740	1,318,763	1,205,006
Scotland	2,193,842	2,199,526	1,971,067	2,134,983	1,612,884
Total	73,202,773	73,354,484	72,127,263	58,560,932	49,247,297

Production of wheat in Birmingham consular district by counties.

Counties.	1889.	1890.	1891.	1892.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*
Hereford	992,350	1,103,522	1,022,778	816,814
Huntingdon	991,837	1,161,732	1,203,891	850,409
Leicester	871,054	898,173	911,853	652,985
Northampton	1,625,051	1,817,840	1,764,745	1,347,817
Oxford	1,393,737	1,436,752	1,334,380	965,960
Salop	1,617,840	1,576,285	1,473,360	1,284,080
Stafford	940,293	908,498	837,505	796,491
Warwick	1,371,352	1,429,883	1,350,607	1,127,904
Worcester	1,234,511	1,383,321	1,267,892	1,089,604
Total	11,038,025	11,716,006	11,167,011	8,932,670

While the production of wheat in England was 55,107,186 bushels for the year 1892 and the average for the years 1889–'92 was 69,311,363 bushels,

the nine counties included in the district produced 8,932,670 bushels in 1892 and an average of 10,713,428 bushels for the same period. Thus, if the district had produced its one-tenth share of the wheat of England, it would have grown about 5,500,000 bushels in 1892, while, in fact, its product was more than its proportion by nearly 3,500,000 bushels. Its people were therefore less dependent upon an outside supply of wheat and flour for their bread, assuming the rate of consumption to be the same, than were those of Great Britain itself taken as a whole.

The Midland district has therefore not only maintained and developed its manufacturing industries, but its wheat-growing industry has suffered less, according to population, than any other part of England. Its people have therefore more nearly produced their own supply of bread, considering their great artisan population, which produces no breadstuffs, than any other part, except perhaps in those counties and districts almost purely agricultural.

The decline in the acreage and production of wheat in the United Kingdom has gone on pretty steadily since 1870, the rate of diminution being even more rapid in Wales, Scotland, Ireland, and the various small islands than in England itself. Thus in the period 1871–'75, of the wheat acreage of the United Kingdom, 87.9 per cent belonged to England, but in 1893 this proportion had risen to 92 per cent. The losses in each of the divisions of the Kingdom may be shown by a comparison of the figures given for 1892 and 1893 of the areas under wheat in each division and in the entire Kingdom.

Wheat production in United Kingdom, 1892–'93.

Division.	1893.	1892.	Decrease.
	Acres.	*Acres.*	*Acres.*
England	1,798,869	2,102,969	304,100
Wales	54,562	55,278	716
Scotland	44,093	61,592	17,499
Ireland	54,988	75,344	20,356
United Kingdom (including Isle of Man and Channel Islands)	1,955,213	2,298,607	343,394

The fluctuations in the extent of the wheat area in England alone for the ten years 1884–'93, together with the increase or decrease each year, is shown by the following table:

Year.	Area.	Increase.	Decrease.
	Acres.		
1884	2,530,711	64,115	.....
1885	2,349,305	.....	181,406
1886	2,161,126	.....	188,179
1887	2,197,580	36,454	.....
1888	2,418,674	221,094	.....
1889	2,321,504	.....	97,170
1890	2,255,694	.....	65,810
1891	2,192,393	.....	63,301
1892	2,102,969	.....	89,424
1893	1,798,869	.....	304,100

The decline is still more marked when the 3,737,140 average acreage in the United Kingdom for the five-year period 1871–'75 is compared with the 1,955,213 acres devoted to wheat in 1893, showing a loss of 1,781,927 acres, or more than 47 per cent, in twenty-three years.

The following table shows the diminishing average yield and the constantly declining price from 1885 to 1893:

Year.	Yield.	Increase on previous year.	Decrease on previous year.	Yield per acre.	Average price per imperial quarter.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*	*s. d.*
1885	74,021,248	.....	.....	31.51	32 10
1886	58,071,171	.....	15,950,077	26.87	31 0
1887	70,874,902	12,803,731	.....	32.25	32 6
1888	68,159,216	.....	2,715,686	28.18	31 10
1889	69,336,374	1,177,158	.....	29.87	29 9
1890	69,442,417	106,043	.....	30.79	31 11
1891	68,694,456	.....	747,961	31.33	37 0
1892	55,107,286	.....	13,587,270	26.2	30 3
1893	46,429,407	.....	8,677,779	25.81	28 4

Wheat, which has always held first place in the agriculture of England, has now lost its position of primacy, being succeeded by oats, there being 1,914,373 acres of the latter cereal in 1893 to 1,798,869 acres of wheat. Even during a period so recent as 1876–'80 the area devoted to wheat was more than twice as much as that given to oats. This disproportion has been lessening continually until 1892 the acreage of wheat, oats, and barley was very nearly the same. The latest development proves that oats and wheat have changed places, and it is generally believed permanently. But the land lost to wheat culture does not all find employment by being sown in other cereals. Compared with 1892, in 1893 there were grown 190,925 acres more of oats and barley; but this still leaves a large area lost to grain culture of any kind. Some of it is accounted for by land permitted to lie fallow, but most of it by the increase in the area devoted to permanent pasturage, a large part of this increase lying in the drought-stricken counties in the south of England. The short crops, not only in Great Britain, but throughout Europe, in 1891, the great yield in India the same year, and the abnormal crops in the United States in 1891 and 1892 have naturally had a great effect in further diminishing the area devoted to wheat, while the profit from this cereal has been constantly declining. Even the small production in the United States in 1893 and the great reduction in area and production in England during the same year have not had the effect of increasing prices, so that there is little in the situation to encourage the farmer of England to return to wheat-growing and thus seek to restore it to its old primacy among agricultural products.

The importation of wheat and flour into the United Kingdom can be best shown by two compact tables dealing separately with these articles. For these I am under obligation to Mr. Robert Giffen, C. B., secretary and statistician to the commercial department of the Board of Trade.

Imports of wheat into the United Kingdom during the years 1889–'93.

Years.	Total imports.		From the United States.	
	Quantity.	Value.	Quantity.	Value.
	Cwts.		*Cwts.*	
1889	58,551,887	£22,510,502	17,009,036	£6,819,175
1890	60,474,180	23,583,844	17,201,063	6,894,807
1891	66,322,962	29,448,204	24,194,955	11,086,838
1892	64,901,799	24,857,902	33,886,742	13,251,875
1893*	65,417,308	21,193,648	32,262,851	10,610,530

Years.	From Russia.		From British India.	
	Quantity.	Value.	Quantity.	Value.
	Cwts.		*Cwts.*	
1889	21,310,304	£8,000,394	9,218,204	£3,405,284
1890	19,389,025	7,481,537	9,111,582	3,461,071
1891	14,552,905	6,433,804	13,005,785	5,507,526
1892	4,362,986	1,470,425	12,495,442	4,812,180
1893*	10,061,988	3,095,501	6,183,508	2,051,816

* The figures for 1893 are subject to correction on final revision of the accounts.

It will be seen that, while the total imports of wheat have increased from 58,551,887 cwts. in 1889 to 65,417,308 cwts. in 1893, or about 11.7 per cent, the amount supplied by the United States has risen from 17,009,036 cwts. in 1889 to 32,262,851 cwts. in 1893, an increase during the period of more than 89.6 per cent. This includes three bad harvests in England and two unusually large ones in the United States. Comparing the last year of the period with the first, the supply from Russia has declined rather more than one-half, and that from India about one-third.

Imports of wheat flour into the United Kingdom during the years 1889–'93.

Years.	Total imports.		From the United States.	
	Quantity.	Value.	Quantity.	Value.
	Cwts.		*Cwts.*	
1889	14,672,082	£8,543,908	10,043,720	£5,661,663
1890	15,773,336	9,074,288	12,025,800	6,734,008
1891	16,723,003	10,184,887	13,703,035	8,229,595
1892	22,106,009	12,267,453	19,467,391	10,686,558
1893*	20,408,168	9,761,510	17,995,601	8,400,236

* The figures for 1893 are subject to correction on final revision of the accounts.

GEORGE F. PARKER,
Consul.

BIRMINGHAM, *January 25, 1894.*

BRADFORD.

STANDARD OF LIVING.

The standard of living in this consular district is high. The people have four and sometimes five meals per day, viz, breakfast in the morning, dinner or luncheon at noon, tea at 5 p. m., and supper at 8 or 9 o'clock in the evening. Some vary this with dinner in the evening and another lunch before retiring at night. At the morning repast and at tea, bread is consumed in large quantities. They are ready for American flour if it can be placed before them in the proper manner. Its introduction must be brought about by personal solicitation, advertising, and the usual methods known to enterprising business men.

AMERICAN WHEAT AND FLOUR.

The flour most used is a "fair upper grade," followed largely by a good consumption of "patents."

The millers who grind American wheat and the dealers who sell American flour in this district do not import direct, but buy their supplies from the importers at Liverpool, Glasgow, and Hull. American-ground flour is used to some extent, but comes into the district so indirectly that it is impossible for me to make an estimate that would be worthy of attention. Some dealers buy it in the open market at Liverpool and mix it with other flours, but the great majority buy and sell a flour of the origin of which they are entirely ignorant. Local millers mix their wheat and use about one-fourth American, the rest being an admixture of Russian, Indian, English, and, occasionally, a little Australian. There are about 2,000,000 people in this consular district. From the facts which I have been enabled to gather, I estimate that their consumption of flour from American wheat ground by English millers represents about 100,000 bushels per annum for the last three years. This includes grain from Canada and South America. This wheat is mostly distributed by Liverpool and Hull brokers.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are all that could be desired, and for forwarding grain or flour to towns in this district the facilities by rail from the various seaports are in all respects admirable.

OBSTACLES TO TRADE.

There are no obstacles in the way of the extension of trade in American flour in this district that can not be overcome by persevering enterprise. Mr. John Hetherington, of No. 12–16, Aldermanbury, Bradford, to whom I am indebted for a great deal of information, attempted the introduction of United States flour twenty years ago. At that time it was accounted too dry to use alone, especially if made from spring wheat. The second day after

baking it became very dry. Some complained also that it was strong. On the other hand, flour made from winter wheat was deficient in color.

It has been found that a blend of the hard American wheats with mellow English and a mixture of Russian produces a flour which, when made into bread, would keep in a fairly mellow condition four or five days. The quality of bread made from American flour alone was good, but dry. It is the opinion of merchants here that our flour would be used in abundance if these difficulties could be overcome. Mr. Hetherington states that a great improvement has been noticed in this direction since he first tried United States flour two decades ago.

To improve color the local millers wash their wheat before grinding, and the American grain stands the process better than any other. This is especially true of the winter wheat. The washing cleans it in a perfect manner and makes it softer. If spring-wheat flour could be made mellower, a great advantage would also accrue to it.

In all those districts in Great Britain where the people are supplied with bread by bakers the conditions for American flour are most favorable. This is the universal custom in Scotland and in all the counties of England, save Yorkshire, Durham, and Northumberland. In these last mentioned counties the vast majority of householders bake their own bread. Therefore, it follows that, not having the same facilities for mixing and baking as the bakers, they follow old customs and do not achieve as good results. In Lancashire, which joins Yorkshire, the people are supplied by bakers and probably fivefold more American flour is used in that county than in Yorkshire. The Lancashire bakers use 50 per cent of American flour, probably more in some cases. This they mix with other foreign or the native English flour. Two flours always "work" better than one, and this mixture produces what is termed "a beautiful loaf." Minnesota flour, in this connection, is highly spoken of. Some of the advantages of this system of mixing might be successfully taught to Yorkshire housekeepers, including those in the Bradford consular district. All the obstacles mentioned by dealers and consumers are pointed out in the foregoing.

A SUGGESTION.

There is one wheat product created in the process of flour-making that is much in vogue here. That is bran. The "broad" bran is wanted. It commands the same price, weight for weight, as low-grade American flour, and there is a strong demand. The only trouble is to obtain a sufficient supply. Samples of United States bran received show it to be too small in its particles. It must be broad, like the English, and clean. It is used for feeding cattle and horses. The impression here is that Americans grind their wheat for the flour only. Pollard or sharps are also in demand for "feed." At one time this product sold for more than flour now brings.

If any American millers can meet this demand for bran of the grade here pointed out, and will apply through the Department of State, I will gladly furnish the names and addresses of persons who will buy liberally.

PROSPECTS.

In my opinion, the prospects for doing a more extensive business in American flour in this country are entirely dependent upon the enterprise, progressiveness, and sagacity of the exporters. The field is here waiting to be cultivated. The English character has been described as "doggedly conservative," but it gives way to perseverance and enthusiasm. In every instance where a determined effort has been made to introduce American goods into this town it has been successful. Notably has this been the case with our various tobacco products, oysters, fresh and canned fruits, cheese, ham, bacon, beef, and pickled and canned meats. Why not with our flour?

CLAUDE MEEKER,

BRADFORD, *January 15, 1894.* *Consul.*

CARDIFF.

STANDARD OF LIVING.

The standard of living in this district is good, and compares favorably with any district in Great Britain. Ninety per cent of the flour consumed is American and other foreign flour, and this is generally of the best quality.

IMPORTS OF FLOUR AND WHEAT.

The American flour consumed in this district is not imported direct.

The quantities of American wheat imported into Cardiff were 100,274, 322,518, and 824,845 cwts. for the years 1891, 1892, and 1893, respectively.

The quantities of foreign flour, American not included, imported were 32 cwts. in 1892 and 18 cwts. in 1893; none in 1891. The quantities of foreign wheat, American not included, imported were 1,812,413, 1,192,762, and 1,984,363 cwts. in 1891, 1892, and 1893, respectively.

EXCHANGE AND SHIPPING FACILITIES.

Banking facilities are good.

Shipping facilities are not as good as those possessed by Bristol; hence the supplies for this district are obtained mostly from that port and from the ports of Portishead, Gloucester, and Sharpness, all in the Bristol district. The importation of grain and flour to the latter ports is on an extensive scale, owing to their proximity to a large area in the Midlands; besides, they have every facility for receiving and storing which the ports of South Wales have not.

OBSTACLES TO TRADE.

The only apparent drawback is the want of better docking facilities, which, of course, does not enhance the prospect of increased trade as regards shipments direct to Welsh ports. Otherwise the trade prospects are good.

ANTHONY HOWELLS,

CARDIFF, *January 20, 1894.* *Consul.*

DUBLIN.

STANDARD OF LIVING.

In my consular district there is much poverty among the classes of unskilled laborers—as great, I presume, as in the average European community—but the standard of living among all classes, measured by the quality of wheat and flour used in bread consumption, is very high. There is little or no demand for any grades of flour except the best spring and winter patents, and of wheat the shipments to this port are chiefly prime grades. Most of the secondary grades brought here are to supply army contracts. Two causes contribute to the almost exclusive use in this district of high-grade flour and wheat; one is the phenomenally low price of wheat and flour, the other the fact that almost the whole of the bread consumed in Ireland is furnished by baking companies between whom rivalry is very keen, compelling a fine quality of bread at a minimum price. I may mention that the bakers of Dublin have a reputation for furnishing bread of an excellence unsurpassed anywhere by the bakers' trade. They are now retailing a 2-pound loaf of the best bread for 2½*d.*, or 5 cents.

My further report will show that American wheat and wheat flour supply this market almost exclusively, and that the use of American flour is gradually encroaching upon the wheat trade. American flour is in good repute here, and its present low price leaves little or no profit to the Dublin miller. The one factor alone which permits the miller here to continue in business is the high price he can secure for the refuse, the bran in this market being worth from $30 to $35 per ton of 2,240 pounds. One of the large milling and baking companies here, which consumes annually about 22,000,000 pounds of flour in their bakery, buys about one-third of this amount in flour, although they would rather manufacture the whole amount themselves if the price of wheat relative to the price of flour would permit.

QUALITY OF FLOUR USED.

There is but little demand for any but the best winter and spring wheat patents. The red winter and spring wheats produce a flour which is in the ascendency in this market, the preference being in favor of the spring-wheat patents. The bakers here profess a preference for flour from the Australian wheat, claiming that the bread therefrom is sweeter in taste and finer in flavor. This preference may be due to the fact that they have no flour trade from that source to compete against. The Australian wheat, however, in this market at the present time commands from 4*s.* to 8*s.* per long ton more than the American wheat. Austrian flour is used to a limited extent, and is the highest priced of any flour in the market; but the supply is a diminishing one, the import into the United Kingdom for 1893 being 1,099,614 cwts., or about one-seventeenth of the flour trade of the United States to the

United Kingdom. In this market the Austrian flour sells at from $5 to $10 per ton more than does the best American; and the average price per ton for all grades of Austrian flour finding a market in the United Kingdom is from $22 to $24 higher than the average price of all grades of American flour sold in this market.

IMPORTS OF FLOUR AND WHEAT.

The following statistics will show the wheat and flour trade at the chief ports in this consular district for the dates given:

Wheat flour and wheat imported at the ports of Dublin, Galway, and Limerick for the years ending June 30, 1891, 1892, and 1893, and showing the countries from which imported.

DUBLIN.

Countries.	1891.	1892.	1893.
Flour.			
United States:	*Cwts.*	*Cwts.*	*Cwts.*
Atlantic	106,069	477,697	559,069
Pacific	188,200	78,820	168,980
Total	294,269	556,517	728,049
Austria	71,200	44,905	38,700
France	7,885	494	4,620
Germany	2,475	.....	40
Other countries	81,560	45,399	37,380
Total	457,389	647,315	808,749
Wheat.			
United States:			
Atlantic	47,400	468,470	480,740
Pacific	873,170	675,580	867,380
Total	920,570	1,144,050	1,348,120
South America	38,160	.....	.....
Russia	714,820	538,060	142,340
Australasia	372,460	433,280	316,720
Germany	25,250	.....	.....
Roumania	74,760	.....	.....
Other countries	1,225,450	972,340	459,060
Total	3,371,470	2,987,730	2,266,240

GALWAY.*

Flour.			
United States:			
Atlantic	.....	40,519	.....
Pacific	66,524	111,303	200,078
Total	66,524	141,822	200,078
Wheat.			
United States:			
Atlantic	.....	.....	33,819
Pacific	5,952	42,545	23,743
Total	5,952	42,545	57,562

* First six months of 1891.

Wheat flour and wheat imported at the ports of Dublin, Galway, and Limerick for the years ending June 30, 1891, 1892, and 1893, etc.—Continued.

LIMERICK.*

Countries.	1891.	1892.	1893.
Flour.	*Cwts.*	*Cwts.*	*Cwts.*
United States (Pacific)	113,640	25,420	70,000
Wheat.			
United States (Pacific)	700,000	600,000	800,000
All other countries	520,000	454,000	900,000
Total	1,200,000	1,054,000	1,700,000

* Estimated.

The above returns show the direct imports only. There is also a cross-channel trade in wheat and flour from English and Scottish ports to the Irish ports. The chief cross-channel trade in wheat and flour to Dublin comes from Liverpool and Glasgow. Large dealers at those ports have their agents here, to whom portions of their imports are consigned by the cross-channel steamers. No record of the quantities so shipped is kept by either the customs or the port and dock officials at Dublin, as the returns are made to the statistical department from the ports of entry. Estimates, based upon information obtained from the principal agents and factors here, indicate that the cross-channel flour trade amounts to 25 per cent of the direct flour shipments to this port, and the cross-channel wheat trade to 10 per cent. Exact figures upon the cross-channel trade, while not obtainable, do not affect the accuracy of the returns upon the imports of wheat and flour to the United Kingdom. The importance it has is two-fold: First, to show the actual consumption of wheat and flour at this port, and, second, to afford a safe basis for comparing the growth of the flour trade. Adding 25 per cent to the direct flour trade at Dublin and 10 per cent to the direct wheat trade, and estimating that the different countries have contributed in the same ratio, the receipts at this port would be for the periods named in the customs returns as follows:

Countries.	1891.	1892.	1893.
Flour:	*Cwts.*	*Cwts.*	*Cwts.*
United States	370,336	695,646	910,061
Other countries	101,950	56,748	46,687
Wheat:			
United States	1,012,627	1,148,455	1,482,932
Other countries	1,347,995	1,069,574	504,966

The above comparisons are, of course, subject to variations. From the best information obtainable the cross-channel trade in wheat and flour is decreasing from year to year, owing to the better facilities for direct importation now afforded by the Lord line steamers plying between this port and the Atlantic ports of the United States. American wheat and flour also sup-

ply a larger part of the cross-channel trade than is estimated in the above comparison between countries. The above estimates, however, are believed to be substantially correct for the purpose of showing the growth of the flour trade at this port, and the more confidence can be placed in them from the fact that they are in accord with the experience of the principal dealers here engaged in the wheat and flour trade. It will also be seen by the above comparisons that in the years ending, respectively, June 30, 1891, 1892, and 1893, flour received at the port of Dublin held a ratio to wheat received of nearly 1 to 5, 1 to 3, and 1 to 2. If we abandon the cross-channel estimates and confine comparisons to the customs returns, the ratios will be nearly 2 to 11, 3 to 10, and 5 to 12.

The imports of wheat and flour into the United Kingdom for the years ending, respectively, December 31, 1891, 1892, and 1893, were:

Year.	Flour.	Wheat.
	Cwts.	*Cwts.*
1891	16,723,203	66,312,962
1892	22,106,209	64,901,799
1893	20,408,168	65,417,308

This shows a ratio of nearly 25 to 100, 34 to 100, and 31 to 100, indicating that the ratio of flour to wheat consumed in this district is greater than for the average for the other ports of the United Kingdom.

EXCHANGE AND SHIPPING FACILITIES.

Monetary exchange is on London. In the wheat and flour trade drafts are drawn at sixty days' sight, and are accompanied by invoice and bill of lading. No credit is asked or given, hence the miller is in possession of his money usually before the consignee is in receipt of the shipment. Consignments to commission firms are not regarded with favor here, and, if practiced at all, it is upon a very limited scale.

As to shipping facilities, the Dublin harbor accommodates ships of the largest burden, and the greater part of the wheat and flour shipments designed for this port are now sent direct, although, as has been stated elsewhere, there is still a considerable, though decreasing, cross-channel trade from Liverpool and Glasgow chiefly. The cross-channel trade has one important advantage over the direct importation, namely, the companies engaged in that trade afford storage room for shipments received by them, while there are no transit-shed accommodations provided for direct importations; consequently the consignee must be prepared to receive and store his consignment as fast as unloaded from the vessel. Wheat and flour from the Pacific coast are consigned to this port usually by sailing vessels. There is now a large direct trade from the Atlantic coast chiefly conducted by the Lord line of steamers. Since the establishment of this direct line of communication the trade in both wheat and flour from the Atlantic ports of the United States has steadily and greatly increased. A part of this increase

has been at the expense of the Pacific coast trade, and, in the opinion of some of the largest dealers here, has operated toward lower prices because of keener competition through the opportunity afforded to small dealers to place their orders direct. In this view, the direct steamship communication with Atlantic ports has resulted in a larger trade, but a trade done at a loss to both the American millers and the Dublin wholesalers.

OBSTACLES TO TRADE.

The obstacles in the way of the American flour trade in this district are slight. The chief obstacle seems to be the uncertainty of arrival of shipments, as there are no fixed sailings to this port. There is also some complaint of damage, chiefly weather damage, to flour while in transit on American railways. This damage is computed to reach about one-fourth of one per cent. In other respects the outlook is good. The American millers, as a class, enjoy a high reputation for honest dealing and for keeping their leading brands up to a high standard of excellence. Sales are now made chiefly upon the reputation of the brand, and in every case where the quality of an established brand has been lowered the result has been a loss of trade. Hence the American miller's supremacy depends upon his maintaining his present high reputation. I may mention here that in the wheat trade Russia enjoys an advantage over the United States, in that sales from that country are made by sample, and if cargo is not up to sample the loss falls upon the consignor, while from the United States sales are made by grade and the certificate is final; in case of inferior grades, which are not rare, the loss falls upon the consignee.

TRADE OUTLOOK.

As to the prospects for a more extensive business in American flour in this district, little or no prejudice exists against American flour, freights are low, exchange and shipping facilities are good, the reputation of American millers high, and the Irish millers have no marginal profit except as to the offal and thus their competition reaches no farther than the demand for their by-products permit. American flour is practically without rivalry from other countries; and hence the problem of extension depends upon the American farmer and the American weather. The extension of the American flour trade in this district hinges almost entirely upon the quantity and quality of the wheat output in the United States in any given year and the consequent comparative price at which prime flour can be sold. There has been for the past three years in this district a rapid increase each year, but this increase will in all probability be slightly checked this year by the lesser quantity and lower quality of the American wheat crop of 1893. The proposed modification of the present tariff system, if enacted into law, will undoubtedly be a factor in increasing the demand for American flour, as there can be little doubt but that the present tariff system has indirectly crippled the extension of this trade.

The extension of markets for our manufactured products is of great importance, and every legitimate means should be employed by our manufacturers to that end; but it may be questioned if our American millers have not forced their foreign markets to their own loss and to the loss of the American farmers who grow wheat. The average price of American wheat in the United Kingdom in 1893 was about $1.60 per cwt., and for American flour about $2.31 per cwt., or a difference only of about 71 cents between the price of 112 pounds of wheat and the same weight of flour; the above prices in each case being the average for all grades. Commenting upon this feature of the markets, the Corn Trade Year Book says:

It is extremely doubtful if more than a small percentage of the American flour is ever shipped on a legitimate basis, leaving a direct profit to the miller in the United States. Much of the stuff is consigned to this side in face of the certainty of its being sold under its bare cost and freight; of this there is indubitable proof.

This close competition is forced upon the American millers in part by the high price the millers of the United Kingdom can obtain for the by-product, but a portion of the low prices realized by them is undoubtedly due to an overzeal in forcing their markets. I revert to the matter because of the direct bearing this question has upon the profits of the American wheat-grower. There are some grounds, however, for hope that the wheat and flour market may gradually improve, as the supply from the crop of 1893 seems to be short of the probable demand prior to the availability of the crop for 1894. It may be noted that, while the United States during the winter of 1891–'92 were putting forth great efforts to relieve the sufferings from famine in Russia, Russian merchants, in order to escape the prohibitive ukase against grain exportation, threw upon the markets of the United Kingdom 14,552,905 cwts. of wheat, while their combined exports of wheat for 1892 and 1893 to the United Kingdom were less by more than 100,000 cwts. than for 1891 alone. In 1891 the price of wheat per quarter averaged $9; in 1892 the average price had dropped to $7.30, followed by a drop in 1893 to from $6.32 to $6.56. While other causes contributed to this great decline, without doubt the Russian deluge gave to it the initial velocity.

Before closing this report I wish to acknowledge my obligations to the wholesalers and agents engaged in the wheat and flour trade in this city for their kindness and courtesy in extending to me every assistance in their power. I desire also to append the reports of the consular agents of this district.

ATHLONE.

Consular Agent John Burgess, at Athlone, reports as follows:

I beg to submit the following answers covering the report on the extension of American wheat flour:

(1) Good. Of the flour eaten, 95 per cent is American.

(2) Seventy-five per cent patents and 25 per cent straights.

(3, 4, and 5) Fifteen hundred tons each year.

(6, 7, and 8) None.

(14) Flour for this place is landed at Galway, where shipping facilities are good.

(15) No obstacles exist.

I have to report the imports of wheat and flour at the port of Galway for the years ending December 31, 1891, 1892, and 1893, as follows:

Description.	1891.	1892.	1893.
	Tons.	*Tons.*	*Tons.*
Flour	5,135	7,352	13,088
Wheat:			
American	916	3,163	1,493
Australian	2,214	.....	.....

LIMERICK.

The following is the report of Consular Agent Richard Hogan, at Limerick:

In submitting my report upon the extension of markets for American wheat flour, I beg to state that I found it impossible to procure figures from the local custom-house or from the harbor office upon this important subject. Therefore, I have had to estimate the quantities from such information as I could obtain from merchants engaged in the wheat and flour trade. Of late years the people in this part of Ireland have been large consumers of American wheat flour, which is imported from the United States direct in sailing vessels or brought here by the channel steamers from England and Scotland. The consumption of American flour in Limerick varies from 1,000 to 6,000 tons per annum. I believe this quantity, however, might be much increased.

The obstacles to increased consumption are, in my opinion, want of direct steam communication between the United States and this port and the prejudice that exists in regard to the importation of manufactured goods from any country when such articles can be as well produced at home.

American wheat is largely imported to this port from both the Atlantic and Pacific ports. There is also importation of wheat from the Black Sea, South America, and Australia. The flour manufactured from all these wheats finds a market in the provinces of Munster and Connaught. There was very little wheat from the Black Sea in 1891, but South America was well to the front in that year.

I am informed that in flour the American spring patents are most esteemed, but some cargoes of excellent flour have been imported from Oregon. There is little trade in flour with any country except the United States.

NEWTON B. ASHBY,
Consul.

DUBLIN, *February 8. 1894.*

EDINBURGH (LEITH).

The standard of living in this consular district is generally high, the community being wealthy upon the average. They consume chiefly American flour. First and second grades, for the most part, are used.

American wheat flour and wheat imported.

Year ending June 30—	Wheat flour.		Wheat.	
	American.	Other.	American.	Other.
	*Sacks.**	*Sacks.**	*Cwts.*†	*Cwts.*†
1891	240,051	75,837	899,905	310,303
1892	534,783	58,004	1,933,502	545,202
1893	707,962	90,150	1,455,588	481,497

* 200 pounds. † 100 pounds.

"Sacks" of flour may contain either 140 or 280 pounds. The reports of importations do not discriminate, but merchants estimate 200 pounds as an average "sack." This report covers only direct importations to this port and takes no note of flour from Glasgow by rail. But little comes that way, however, and there are no statistics available.

Every facility exists for monetary exchange at London rates.

The facilities for shipping from the United States consist of a regular line of steamers from New York and one from Newport News; also occasional steamers from Baltimore. Additional vessels are chartered as freights offer.

No obstacles to the extension of trade are known to exist. Trade is limited only by the law of supply and demand. American flour is esteemed best after Hungarian, which makes rather more loaves from the same quantity. The "Pillsbury" is very close to the Hungarian in this respect. Bread is made wholly by bakers, and never in private families. The bakers are therefore the customers who are to be satisfied.

The prospect is that the importation of American flour and wheat will increase. At present prices, competition on the part of British and continental wheat-growers and millers is out of the question. There is some competition from Canada. Even if prices rise, the reputation of American flour will keep it practically at the head of the list. Importations of fine Hungarian flour are diminishing, and the high price demanded for it gives the American product an advantage.

F. H. UNDERWOOD,
Consul.

EDINBURGH (LEITH), *January 26, 1894.*

CORK.

STANDARD OF LIVING.

The standard of living in this consular district is fairly good, there being at this time very few unemployed persons and no distress that calls for special notice. Practically the only form in which public charity has taken definite shape this winter is in respect to the "coal fund," that is, a fund to provide the poor with coal. The consumption of American flour is universal and exceeds that of all other flours.

QUALITY OF FLOUR CONSUMED.

The flour consumed is "medium" to "best" in quality, low grades not being in demand.

AMERICAN WHEAT AND FLOUR IMPORTS.

The following table shows the quantity of wheat and wheat flour imported into the port of Cork during the years ending June 30, 1891, 1892, and 1893:

Country.	Wheat.			Wheat flour.		
	1891.	1892.	1893.	1891.	1892.	1893.
	Cwts.	*Cwts.*	*Cwts.*	*Cwts.*	*Cwts.*	*Cwts.*
Russia (south)	669,068	254,840	177,037	.....	.....	.....
Germany	28,500	.....	.....	28,200	50	.....
Roumania	62,730	.....	.....	.....	.....	.....
South Australia	24,500	.....	29,300	.....	.....	.....
New Zealand	192,142	30,760	28,800	.....	.....	.....
United States:						
Atlantic	186,460	713,979	667,148	.....	10,889	114
Pacific	94,881	37,000	78,140	.....	59,440	20,788
Chile	.....	82,468	.....	.....	.....	.....
Argentine Republic	234,031	860	86,360	.....	.....	.....
Canada	.....	.....	.....	.....	.....	52

The sale of American flour in Cork city is estimated at 3,000 bags of 280 pounds each weekly. This flour is imported chiefly through Liverpool, possibly small amounts coming through Bristol and Glasgow, between which and this port there are regular lines of coasting steamers.

The flour is sold by the American exporters "C. I. F." (cost, insurance, and freight). It is shipped in bags of 70, 140, and 280 pounds, the largest bags greatly predominating in number.

An arrangement is being made here for regular direct importations of flour from Baltimore.

The importers of American flour doing business in Cork are Byrne, Mahony & Co., R. H. Craig & Co., and William Bannister. The wholesale dealers in American flour doing business in Cork are Joseph Harty & Sons, Richard Clear & Co., Samuel Anglin & Sons, and William F. Ryan.

MONETARY AND SHIPPING FACILITIES.

The facilities for monetary exchange leave nothing to be desired.

No direct line of steamers or sailing vessels discharge freights at this port. The White Star, Cunard, Guion, and American (Inman) lines merely land and receive passengers and mail. These great lines, doing business between Liverpool and New York, Philadelphia, and Boston, touch at this port regularly, but not for cargo business.

TRADE OUTLOOK.

The only obstacle in the way of extending trade in American flour is that the trade is already very large, consequently there is no great room for its extension in this district.

LUCIEN J. WALKER,
Consul.

CORK, *February 3, 1894.*

GLASGOW.

STANDARD OF LIVING.

The standard of living is high in this district, and the people are ready to eat American flour—it is preferred to any other.

The city of Glasgow is now officially estimated to contain 623,000 inhabitants, while in Partick, Govan, and other municipalities and suburbs, which are really a part of Glasgow, there are some 200,000 people.

Wheat bread is extensively used by all classes and is a staple article of food. The consumption is enormous, and the opportunity for the use of American flour is being daily enlarged.

QUALITY OF FLOUR CONSUMED.

The quality of the flour used is spring and winter wheat patent flour from the United States and flour from local mills and from France and Hungary. Only about one-eighth of the imported flour now comes from the two countries last named.

IMPORTS OF FLOUR AND WHEAT.

The quantity of flour and wheat imported into this district was:

Year.	From the United States.		From other countries.	
	Wheat flour.	Wheat.	Wheat flour.	Wheat.
	*Sacks.**	*Quarters.*†	*Sacks.**	*Quarters.*†
1891	1,173,496	421,498	309,348	90,988
1892	1,461,547	617,784	148,538	19,911
1893	1,474,895	534,953	171,306	16,364

*280 pounds each. †480 pounds each.

EXCHANGE FACILITIES.

The almost invariable rule is for the American shipper to draw on his consignee at sixty days' sight against the documents forming the title to the consignment. This draft is generally negotiated by the shipper, and the consignee can only get the bill of lading and delivery of the goods on payment of the draft.

There is no trouble as to monetary exchange; the facilities are ample.

SHIPPING FACILITIES.

The facilities for shipment from the United States to Glasgow are good, but shipment under present conditions must probably be made in foreign vessels. During the last year but few American vessels have reported at any of the ports in this district, and these have all been sailing vessels loaded with spool wood and coming from Portland, Me.

There are several lines of vessels from Glasgow to the United States. Two of them, the Anchor and Allan lines, run transatlantic steamships regularly between Glasgow and New York, Boston, Philadelphia, Newport News, and occasionally Baltimore.

Some of these steamships leave New York and Glasgow every week. For the last year, especially during the last six months, owing to the financial depression, the supply of transportation has exceeded the demand. There will probably be no difficulty in the speedy shipment of all the flour to this port from the United States that can be sold here.

OBSTACLES TO TRADE.

The competition of the local millers, who have the wheat markets of the world at their command, as well as a considerable home supply, is the only serious obstacle in the way of an extension of trade in American flour. The apparent apathy of our flour dealers in the United States also hinders extension. Much can be done by a personal visit here, with samples, which can not be reached alone by correspondence.

I know of one miller from Adrian, Mich., who last summer personally visited Glasgow and other cities in the United Kingdom with samples of his flour, and he found no difficulty in placing his product, or in continuing the sale thereof.

TRADE OUTLOOK.

As will be seen from the figures heretofore given, the consumption of American flour is on the increase. The American millers already supply one-half or more of all the wheat flour used in this district, and it is the opinion of those engaged in the trade that in the future the importation of American flour will steadily increase.

I annex an excerpt from the Glasgow Daily Herald of December 27, 1893, which gives reliable information on the subject. The figures in the newspaper are for the cereal years ending August 31.

MILLING.

The characteristic, if such it can be called, so far as the milling trade is concerned, of the year 1893, may be summed up in the word disappointing. The tremendous drop in prices experienced during the preceding year gave place to a more sober and dignified method of progression, but still unfortunately in the same downward direction. A fall in price to the extent of 7*s.* per sack in flour and 12*s.* per quarter in wheat took place during 1892, whereas 1893 has had to content itself with a drop amounting only to 2*s.* 6*d.* in flour and about 3*s.* in wheat. Merchants, millers, and bakers have, as a rule, been holding very large stocks of both wheat and flour; and so long as this continues—so long, indeed, as everyone keeps

prepared for a rise—there is small probability of the consummation so devoutly wished for taking place. Spasmodic attempts have, indeed, been made by the speculative element in America to raise the level of values, but with no very marked success. Millers here, finding it quite out of the question to respond to any extent, owing to the depressed price of flour, simply refrained from buying at the enhanced values. Stocks of wheat accumulated because of the absence of any shipping relief, and prices had perforce to resume their former depressed level. The very large import of foreign flour has again been the great stumbling block in the path of the home miller, and so long as the Yankee is actuated by the, to him, patriotic notion that the manufactured article alone should find its way to the ports of the Britisher this state of matters, given a fair crop in America, is likely to continue. Notwithstanding the glut of foreign flour, the home miller has kept fairly busy during the past year, mainly owing to his being able to put hard-wheat flours on the market at a more moderate price than his principal competitor. The same, unfortunately, can not be said with regard to winters. The chances are, however, that this state of matters may improve, and so a presently dormant branch of the millers' business become once more available. A feature of the last few weeks has been the free buying, by merchants and millers alike, of new-crop Russian wheats for present, January, February, and April–May shipment. Of very excellent quality, and having first-rate milling properties, this class of wheat has not been without its effect in checking any advance in the price of American varieties. With regard to imports, in 1892 we received 628,645 quarters of wheat; this year the quantity is likely to be somewhat less—about 585,000 quarters. Of flour, last year we imported 1,734,271 sacks of 280 pounds, while during 1893 the quantity is smaller, amounting to about 1,635,000. During 1892 49,349 quarters of wheat were reëxported from Glasgow; this year somewhere in the neighborhood of 56,000 quarters have been so disposed of. Last year 952,744 sacks of flour, home millers and foreign, left Glasgow; this year the quantity will be somewhat smaller, namely, 932,000 sacks. It is a matter of no small difficulty forecasting with any degree of accuracy the immediate future of the milling trade. As a general rule, the demand for home flour improves with the opening year; but any enhancement in value seems, with the present prospective abundant supplies, a very doubtful quantity indeed. Millers will without doubt do their utmost to keep mills running full time, and so give constant employment to their men. Should the fortune of war, however, be against them, the chances are they will, like Mark Tapley of pious memory, seek to be jolly under all circumstances, setting, as the good old saying hath it, a stout heart to a stey brae.

ALLEN B. MORSE,
Consul.

GLASGOW, *January 4, 1894.*

HULL.

EAST RIDING MILLERS.

The probabilities of the immediate or eventual extension of markets for American wheat flour involve the examination and consideration of many local circumstances and statistics. From a careful review of facts and information of an absolutely trustworthy character, it may be accepted without question that the prospect of an increased import of wheat flour is assured so long as present conditions obtain or remain substantially unaltered.

In the first place, it is necessary to take a retrospective view of the flour industry in the extensive territorial area comprised within the consular

district of Hull in order better to understand and appreciate the existing position of the import trade. Apart from Hull, the East Riding of the county of York is, and always has been, an essentially agricultural country, producing a large quantity of wheat grown on good lands and possessing excellent facilities for transit by rail, river, and canal. Flour mills abounded, and Hull and the contiguous district were equally noted for the number of mills. With the rapid growth of population, however, the windmills and mills worked by water courses became more picturesque than useful, and when the American and Hungarian inventions for manufacturing flour by the roller process came into vogue the old mills and old methods were unable to satisfy the demands of the population, either as to quality or quantity.

The pressure of economic and industrial needs forced the local millers to abandon means and premises which had become obsolete, and, in point of fact, unprofitable, with the result that new and, in every instance, very extensive mills, thoroughly appointed with the newest kinds of machinery, with large storage capacity, were erected, and they are now in full working order. As a natural consequence, there is a vast increase in local production of flour, with an appreciable reduction in price, compared with the cost to the consumer under the old order of things. This is a fact which must not be lost sight of in discussing the question of American wheat flour. The introduction of improved methods of milling, together with commensurate buildings for storage, has undoubtedly had considerable effect upon the imports of flour, but to what extent is a matter of pure conjecture. On this, as well as on other points, it may be mentioned that the millers maintain a surprising amount of reserve. Assuming that American flour, or rather its importation, has suffered to some extent by the enterprise of local manufacturers, the diminution, if such it may be termed, is fully countervailed by the use of wheat from the United States. In the Hull mills and the mills of the East Riding, much American wheat is made into flour, but the quantity used is not ascertainable, owing to the indisposition on the part of the millers to disclose any material facts relative to their trade.

As illustrating the rapid development of the flour-milling industry in Hull and the surrounding country, it is sufficient to mention the fact that large quantities of flour are sent into various parts of Lancashire and Yorkshire. No data on this aspect of the question is procurable, but the fact is of itself suggestive. How far the millers would be able to supply a portion of the needs of Lancashire and the distant Yorkshire towns, were the import from America less, is a subject of speculation and not of certainty. It tends to show, however, that with the increased imports of foreign wheat and improved mechanical arrangements the competitive and aggressive power of local manufacturers has become more formidable. The opening of the Manchester Ship Canal and the consequent rearrangement of railway policies and tariffs may or may not increase the production of flour in this connection.

STANDARD OF LIVING.

Another point which must not be overlooked in relation to the subject under consideration is that in eastern Yorkshire, as already indicated, the population is chiefly rural. With the exception of Hull, all the towns within this division of Yorkshire are representative of the agricultural interest. There is an absence of manufacturing industries and of centers of population such as characterize the West Riding of Yorkshire. Nor can the standard of living be regarded as equal to that of the industrial population of the West Riding, where both men and women are well paid for their work and can consequently indulge themselves in a greater variety of food. Still, the population in the East Riding can not be said to subsist either on an insufficient or low standard of diet. Bread, of course, is the staple article of diet, and fresh meats, fish, and other foods are certainly within their average purchasing means.

Apparently there is no difficulty on the part of retailers of flour in disposing of American flour, and inquiry proves that the quality and nutritive properties are perfectly satisfactory.

QUALITY OF FLOUR CONSUMED.

A large importer of American produce carrying on business in Hull states that the quality of flour most used is straights and patents; but it may be said of American flour, as of English, that the average consumer varies in his or her preference. Incidentally, and in no inconsiderable degree having connection with the use of American flour, it is interesting to note the fact that in Hull there are some very large bakeries which serve a vast number of households every day with bread. The consumption of bakers' bread is constantly increasing, and this is a circumstance worthy of observation, in that it largely militates against forming an accurate judgment as to what is the popular opinion on the relative merits of English, American, Austrian, German, or other flours. In eating bread from the steam bakeries the people are incapable of distinguishing whether it is made from English or other flour, and therefore do not acquire any particular preference.

IMPORTS OF WHEAT AND FLOUR.

The consumption of imported flour by way of Hull continues to show a decided improvement in respect of quantity, notwithstanding the increased ratio of production in the home markets. From whatever source they are obtained, the statistics, although manifesting some remarkable fluctuations and involving some slight variations in the totals, establish the vitality of the import trade and encourage the most hopeful anticipations of an increased consumption, with the more than possible opening out of new fields of enterprise. It is a peculiarly strange fact that the representative commercial organizations, while they distinguish with particularity the different countries sending wheat to England, do not apparently think it of sufficient importance to specify the quantities of flour received from the several ex-

porting countries. The result of this inappreciation of the value and importance of discriminating in respect of the imports has necessitated a laborious search and study of the diurnal records of the custom-house, embracing a number of years. The imports are given in hundredweights and represent the total consignments of wheat flour from the different countries named for the calendar years.

Wheat flour imports at Hull.

From—	1891.	1892.	1893.
	Cwts.	*Cwts.*	*Cwts.*
United States	90,134	139,900	136,911
Austria-Hungary	30,196	23,563	28,071
Germany	23,963	11,377	31,877
France	5,847	3,194	6,358
Italy	5,976	6,108	13,020
India	.....	5,000	.....
Russia	3,423	3,391	.....

According to figures in the possession of the Hull Chamber of Commerce, the following are the total entries of imported wheat flour since 1883; but, as already stated, no mention is made of the countries exporting the same:

Year.	Quantity.	Year.	Quantity.
	Cwts.		*Cwts.*
1883	295,520	1889	78,114
1884	202,559	1890	101,877
1885	141,606	1891	*157,343
1886	125,976	1892	*185,090
1887	100,172	1893	223,569
1888	184,827		

* The imports by countries for the years 1891 and 1892 in the preceding statement exceed these totals.

Thus it would appear that the imports of flour are the highest in the first and last years just mentioned. The American flour maintains an undoubted supremacy in the official returns, and everything points to a still further development of the trade, as the area of wheat cultivation in the United Kingdom is constantly being restricted.

Concerning the importation of wheat at Hull, the figures for the last decade will serve to show the huge development which has taken place. The following are the total quantities imported for the years 1884–'93:

Year.	Quantity.	Year.	Quantity.
	Quarters.		*Quarters.*
1884	944,275	1889	2,112,699
1885	1,288,552	1890	2,034,538
1886	1,353,762	1891	2,420,084
1887	1,406,410	1892	2,317,389
1888	1,985,744	1893	2,346,184

For the years ending December 31, 1891, 1892, and 1893, the imports of wheat were from the following countries:

Countries.	1891.	1892.	1893.
United States:	*Quarters.*	*Quarters.*	*Quarters.*
East coast	339,844	516,420	641,855
West coast	415,716	474,248	708,067
Total	755,560	990,668	1,349,922
Australasia	13,589	.....	27,427
India	1,030,340	812,168	503,444
Chile	.....	11,308	55,037
Egypt	69,877	34,604	2,696
Germany	10,055	62,425	1,790
Russia	399,796	124,807	398,197
Roumania	122,026	153,503	8,089
Turkey	14,454	9,261	.....
All other	4,387	18,585	5,642
Grand total	2,420,084	2,217,329	2,346,284

EXCHANGE AND SHIPPING FACILITIES.

The whole of the American flour trade from New York is carried by the Wilson line of steamers, which are cargo boats simply, although they occasionally carry passengers. This is a fact which precludes the idea of a much lower rate of freight. In all other respects there is every reason to be satisfied with the conditions under which the trade is conducted. The shipping facilities are all that can be desired, and there is ample warehouse and shed accommodation for cargoes of flour and wheat. The Messrs. Wilson quote through rates from America, and a considerable quantity of the flour which they carry is destined for Norway and Sweden and other places on the Continent. The shipping facilities being in every respect favorable and the dock accommodations excellent, the outlook for the trade is eminently satisfactory. The steamers of the Wilson line run regularly and are well adapted to the Atlantic trade.

Moreover, the facilities for monetary exchange are described by importers of American produce as excellent, and no alteration is suggested as an improvement upon the existing system of exchange, which has been found to work perfectly satisfactory.

OBSTACLES TO TRADE.

There are one or two things which may retard the growth of the American trade in so far as regards the northeast coast of England. The freight is appreciably higher than it is to the west coast. This is the natural result of the difference in geographical position, but it is none the less an important factor in the import of flour or any other goods from American ports. A single quotation from a freight circular will suffice to illustrate how, in this connection, the east coast is handicapped. Flour in sacks is quoted at 11*s.* 3*d.* and 12*s.* 6*d.* per ton for Liverpool, 12*s.* 6*d.* for London, 15*s.* for Southampton, 12*s.* 6*d.* for Glasgow, 13*s.* 9*d.* for Bristol, 12*s.* 6*d.* for Leith, 15*s.* for Hull, and 15*s.* for Newcastle.

The only possible obstacles to an indefinite extension of trade in American flour are the increased local output and the higher rate of freight as compared with the west coast. But, as indicating the unlikelihood of local and shipping conditions operating to the prejudice of American flour, there is the fact that the shipments from New York show an increased average and volume.

BYRON G. DANIELS,
Consul.

HULL, *January 27, 1894.*

NOTTINGHAM.

The standard of living in Nottingham is higher than in most manufacturing districts in England, and about the same as in towns of like population (250,000) in the United States. The people are ready to eat American flour.

The quality of flour most used is of the better grades.

This district is wholly inland and no statistics as to imports of wheat and flour apply thereto.

The facilities for monetary exchange and shipping are ample.

The only obstacle in the way of the extension of trade in American flour is the price, which is some 2½ or 3 per cent higher than Hungarian and other flours.

The outlook for increased trade in American flour is favorable, provided its cost is not in excess of that of other foreign flours. The consumption of American wheat and flour in the United Kingdom is dependent almost wholly upon the price as compared with that furnished by other countries.

The following is a statement from the London Times, of January 22, 1894, showing the annual average prices of English wheat per "imperial quarter" (480 pounds) for each of the last forty-two years:

THE PRICE OF ENGLISH WHEAT.

To what depth the trade in native wheat has fallen is well illustrated in the subjoined table, which records the average price per imperial quarter of English wheat for each of the last forty-two years, as well as the highest and the lowest weekly average prices per quarter in each year, while the last column shows for each year the difference between the extreme prices. The average price of 26*s.* 4*d.* for last year is 3*s.* 5*d.* below that of 1889, which is the lowest average previously recorded. Moreover, if we except the year 1892, the highest weekly average of 1893 falls below the lowest weekly average of any previous year. The lowest weekly average of 24*s.* 8*d.* in 1893 is absolutely the lowest average price ever recorded. How uneventful was the trade of 1893 is shown by the circumstance that the extreme fluctuation in the weekly average prices did not exceed 3*s.* 2*d.* per quarter, so that the dull year of 1889 now loses its place as the lowest hitherto on the list, and it is exceedingly noteworthy that the highest weekly average of 1893 did not reach the lowest weekly average price of 1889. Farmers whose memory carries them back to the time when anything less than 40*s.* a quarter for English wheat was undreamt of will scan the figures with saddened eyes, for they will see that during the whole of the last decade the 40*s.* limit has only once been passed,

and that was for but a brief period at about the month of May, 1891. The table shows that the ten years which closed with 1893 might fairly be called the "thirty-shillings decade," for the mean average of the whole period is less than 32*s.* Who can say that we have not now embarked upon a "twenty-shillings decade?"

Annual average prices per imperial quarter of English wheat, 1852–1893.

Year.	Calculated annual average.	Highest weekly average.	Lowest weekly average.	Range per quarter.
	s. d.	*s. d.*	*s. d.*	*s. d.*
1852	40 9	43 3	38 4	4 11
1853	53 3	72 5	44 2	28 3
1854	72 5	80 10	56 7	24 3
1855	74 8	80 10	67 8	13 2
1856	69 2	76 6	60 3	16 3
1857	56 4	63 4	48 7	14 9
1858	44 2	48 0	40 7	7 5
1859	43 9	51 3	40 2	11 1
1860	53 3	60 4	43 10	16 6
1861	55 4	60 11	50 7	10 4
1862	55 5	61 4	46 4	15 0
1863	44 9	47 4	40 0	7 4
1864	40 2	43 1	38 1	5 0
1865	41 10	46 7	38 3	8 4
1866	49 11	61 7	44 5	17 2
1867	64 5	70 5	53 3	11 2
1868	63 9	74 7	49 5	25 2
1869	48 2	54 2	43 5	10 9
1870	46 11	54 11	40 7	14 4
1871	56 8	60 0	52 6	7 6
1872	57 0	60 3	53 11	6 4
1873	58 8	64 7	54 7	10 0
1874	55 8	63 9	43 5	20 4
1875	45 2	53 10	40 11	12 11
1876	46 2	50 8	42 8	8 0
1877	56 9	68 9	50 1	18 8
1878	46 5	52 4	39 0	13 4
1879	43 10	50 5	37 7	12 10
1880	44 4	48 4	39 5	8 11
1881	45 4	52 2	40 9	11 5
1882	45 1	51 3	39 2	12 1
1883	41 7	43 10	39 0	4 10
1884	35 8	39 0	30 5	8 7
1885	32 10	38 1	30 2	7 11
1886	31 0	35 0	29 0	6 0
1887	32 6	36 4	28 5	7 11
1888	31 10	38 1	30 1	8 0
1889	29 9	31 2	27 11	3 3
1890	31 11	36 6	29 8	6 10
1891	37 0	41 8	32 3	9 5
1892	30 3	36 4	25 8	10 8
1893	26 4	27 10	24 8	3 2

The years of extreme quotations in the foregoing table are noteworthy. The highest annual average price was 74*s.* 8*d.* per quarter in 1855 and the lowest was 26*s.* 4*d.* in 1893. Of the highest weekly averages the maximum was 80*s.* 10*d.* in the Crimean war years of 1854 and 1855, and the minimum was 27*s.* 10*d.* last year. Of the lowest weekly averages, the maximum was 67*s.* 8*d.* in 1855, and the minimum was 24*s.* 8*d.* in 1893. The year of widest fluctuations was 1853, when the difference between the highest and lowest weekly averages was as much as 28*s.* 3*d.*, which represents more than the highest weekly average price of native wheat in 1893. The minimum range is last year's 3*s.* 2*d.*

I also attach a statement showing the respective qualities of the different varieties of wheat consumed in the United Kingdom and their prices:

Comparative qualities of thirty-five varieties of wheat used by British and Irish millers.

Description.	Strength.	Color.	Flavor.	Moisture.	Per quarter of 480 pounds.
English:					
White	1	10	10	10	27*s.* in Nottingham.
Red	2	9	10	10	25*s.* 6*d.* in Nottingham.
New Zealand	2	9	9	9	Not known.
Canadian White	3	8	8	8	Do.
Oregon	1	10	8	7	Do.
Walla Walla	1	8	7	7	25*s.* in Liverpool.
Californian	3	8½	6	6	26*s.* 6*d.* in Hull.
Australian	4	9	9	6	27*s.* in London.
Chilean	3	8	7	7	Not known.
Red winter	5	8	8	8	Do.
Spring:					
No. 1	6	7	7	7	25*s.* 9*d.* in London.
No. 2	6	6	7	7	24*s.* 9*d.* in London.
Dantzic:					
White	4	8	8	8	Not known.
Red	5	7	8	8	Do.
Königsberg	5	7	8	8	Do.
Polish	3	6	7	8	Do.
Danubian	3	5	5	7	23*s.* 6*d.* in Hull.
Azura	5	6	8	8	23*s.* 6*d.* and 25*s.* 6*d.* in Hull.
Ghirka	6	6	7	7	Do.
Persian	5	5	5	7	Not known.
River Plate	4	7	6	7	23*s.* 9*d.* in Hull.
Taganrog	7	5	6	6	Not known.
Saxonska	9	7	7	7	Do.
Kubanka	10	7	7	7	Do.
Manitoba	9	7	8	7	27*s.* in Hull.
Duluth	8	7	7	7	
Bombay:					
White	2	9	5	5	27*s.* in London.
Soft Red	4	6	5	5	26*s.* in London.
Delhi	2	8	5	5	Not known.
Kurrachee:					
White	3	6	5	5	22*s.* 6*d.* and 24*s.* 6*d.* in Hull.
Red	4	5	5	5	21*s.* 6*d.* and 23*s.* 6*d.* in Hull.
Calcutta:					
No. 1	2	8	5	5	26*s.* in London.
No. 2	4	6	5	4	24*s.* 1*d.* in London.
Red	4	4	4	4	23*s.* in London.
Egyptian	0½	2	2	2	Not known.

NOTE.—The figure "10" represents the standard of perfection.

A. D. DICKINSON,
Consul.

NOTTINGHAM, *January 31, 1894.*

SHEFFIELD.

STANDARD OF LIVING.

The standard of living in this district is moderate, but compares favorably with that of any other portion of England. The population is chiefly of the working and industrial classes, who eat three meals per day—breakfast, dinner, and tea. Bread, beef, mutton, pork, fish, vegetables, veal, coffee, butter, bacon, cheese, and beer are the principal articles of food and drink. The wealthier classes indulge in a more varied fare—game, ham, eggs, fruits, pastry, sweets, wines, etc.

The people are ready to eat American wheat flour provided they can get good quality at a low price. The flour mostly used here is known as the "XXX" standard, which dealers purchase from local millers, who supply the trade at about 23 to 24 cents per stone (14 pounds).

IMPORTS OF FLOUR AND WHEAT.

As far as can be ascertained, no American wheat flour comes into the district. As competition among the millers is very keen, the prospects for others doing business in wheat flour are poor.

Mr. Samuel Smith, Victoria Corn Mills, Sheffield, furnishes the following estimates of wheat imported into this district:

Year ending June 30—	From the United States.	From other countries.
	Bushels.	*Bushels.*
1891	50,000	1,900,000
1892	140,000	2,000,000
1893	440,000	2,800,000

EXCHANGE AND SHIPPING FACILITIES.

No difficulties exist in the way of monetary exchange. Besides the banks which negotiate through London, there are two local houses which exchange moderate amounts at sight.

The facilities for shipping from the United States are good, viz, by vessel to Liverpool, Hull, or London, and then by rail. Goods are shipped cheaply via Hull and the Goole Canal, though this route is longer. Goods can be shipped by vessel to Manchester direct via the ship canal, which has recently been opened for traffic, and then by rail.

BEN. R. BEDLE,
Consul.

SHEFFIELD, *January 19, 1894.*

TUNSTALL.

STANDARD OF LIVING.

The district of Tunstall proper contains a population of about 250,000. The chief industries are pottery and coal and iron mining. The pottery industry so far excels all others that the district is commonly known as the "Potteries." There are no statistics that give any reliable information of those engaged in the various pursuits, but from all sources obtainable the number engaged in each industry is approximately as follows:

Colliers and ground men	18,000
Iron workers	2,000
Potters (men, women, and children)	40,000
All other trades	10,000

The standard of living fluctuates with the ebb and flow of business, and the general average is raised or depressed more by the prosperity or depression of the pottery trade than by all other causes combined.

Weighed in this balance the standard of living, at the present time, is lower than for many previous years; in fact, a fair statement of the general standard of living can not be made from the present condition of the working classes.

During times of fair or brisk trade the general standard of living in this district will be equal to that of any other manufacturing district in England.

QUALITY OF FLOUR CONSUMED.

The great bulk of the flour used in this district bears the brands of "Patent ooo," "Superfine oo," and "Long Fine o," of which the greater quantity used is the middle quality.

The people are ready to eat American flour whenever the quality and price give better bargains than the product of any other country.

IMPORTS OF FLOUR AND WHEAT.

It is impossible to give even an approximate answer to these questions, as no American flour is imported directly into this district, and the small quantity used is purchased in Liverpool. I have been unable to find, after the most careful inquiries, any American flour for sale in any of the retail shops of this district. Nearly all the flour used is made in the various mills here from home-grown and imported wheat. Individual families use but little flour, as bread and nearly all pastry is purchased at the bakeries. I can not ascertain from the bakers what proportion of American flour they use.

The wheat made into flour by the two leading mills in this district during the period named is mixed in the following proportions:

Mill No. 1.—United States, one-third; Russian, one-third; Indian, one-third.

Mill No. 2.—Canadian, one-sixth; Northern, one-sixth; Russian, one-sixth; Indian, one-sixth; English, one-sixth; American (Kansas), one-sixth.

Previous to the years named in the Department circular a much larger proportion of American wheat was used in mill No. 2, sometimes reaching as high as three-fourths of the entire quantity, while in mill No. 1 American wheat was almost entirely used in 1891 and 1892.

EXCHANGE FACILITIES.

The facilities for monetary exchange are the Manchester and Liverpool District Banking Company (limited), the Birmingham District and Counties Banking Company (limited), the National Provincial Banking Company (limited), and Lloyd's Banking Association.

SHIPPING FACILITIES.

This district is reached by the London and Northwestern Railway Company and the North Stafford Railway Company from Liverpool, and also by canal from the same port.

OBSTACLES TO TRADE.

The main obstacle is the conservatism of the bakers, who furnish nearly all the bread of the district—the fear of change and the desire (if a lower price does not offer too great an inducement) to follow the course pursued for many years. Bakers have a steady trade, and any change in the line of experiment with new brands of flour is avoided.

TRADE OUTLOOK.

No steps have been taken to directly introduce American flour into the district. Flour made here will continue to be used until such steps are taken. The millers will buy American wheat whenever it is to their advantage to do so; but the consumers, without solicitation, will not purchase American flour. The old channels of buying this product will not be broken up without an effort on the part of the American seller. I see no reason, however, why a market can not be opened here for the American product if the project be sufficiently pushed. "Superfine oo" retails for 36 cents per 14 pounds. Many English people in this district who have resided in the United States for a time claim that American flour, grade for grade, is better than the English product. If such be the case, a market once gained can be held.

WENDELL C. WARNER,

TUNSTALL, *January 15, 1894.* *Consul.*

WATERFORD.

Wheat flour is largely used in this district by all classes. Bakers supply nine-tenths of the bread consumed. American flour is largely imported, principally via Liverpool.

It is very difficult to obtain a correct return of the quantity, there being no statistical record kept.

The quantities of wheat imported during the years 1891, 1892, and 1893 coming direct to Waterford were small and did not average more than one cargo in each year, calculating about 2,500 tons for each cargo. At the same time, however, a large quantity was imported, principally via Liverpool. Of wheat imports, there were from Australasia about 4,000 tons per year for the years 1891, 1892, and 1893. These were direct imports; also, via Liverpool there were sundry large parcels. From California there were for the years 1891, 1892, and 1893 one cargo each year, averaging 2,000 tons each. No wheat is imported from other countries.

Steamers and sailers are easily obtained for the transport of grain to any safe port in Ireland.

I am not aware of any obstacles in the way of the extension of trade in American flour.

In my opinion, an extensive business can always be done; all depends, however, on prices.

WILLIAM H. FARRELL,
Consular Agent.

WATERFORD, *January 9, 1894.*

GIBRALTAR.*

STANDARD OF LIVING.

The standard of living in Gibraltar may be considered as a tolerably high one, and can be favorably compared with the highest ruling throughout the Mediterranean.

For the past century American flour has always been a favorite article of consumption in Gibraltar.

QUALITY OF FLOUR CONSUMED.

Both superior and low grade flour is imported, but the bulk consists of low grade.

IMPORTS OF FLOUR AND WHEAT.

As no official statistics are kept in Gibraltar with regard to the importation or exportation of flour or wheat, I have in consequence been under the necessity of having recourse to that part of the commercial community who deal in flour and cereals to compile the following data to enable me to offer as accurate a reply as possible to several of the queries set forth in the circular.

*See also p. 385.

The direct imports of flour during the years ending June 30, 1891, 1892, and 1893, were as follows, in sacks of 280 pounds each:

From—	1891.	1892.	1893.
	Sacks.	*Sacks.*	*Sacks.*
United States	3,442	17,340	42,835
Great Britain	25,262	16,910	18,585
France	6,820	3,444	2,750
Algeria	84	.....	40
Total	35,608	37,694	64,210

A large portion of the flour thus imported from Great Britain was to meet Government contracts for supplying the garrison of Gibraltar.

No American wheat was imported during the years ending the 30th of June, 1891 and 1892, but 6,000 bags of 224 pounds each were imported in 1893.

Wheat imported from countries other than the United States during the years under consideration, in bags of 224 pounds each, was as follows:

From—	1891.	1892.	1893.
	Bags.	*Bags.*	*Bags.*
India	11,430	5,000	67,200
France	9,124	.....	.....
Great Britain	800	.....	7,526
Total	21,354	5,000	74,726

The wheat credited to England and France in this table was Indian wheat.

EXCHANGE FACILITIES.

The usual facilities are afforded here for monetary exchange, similar to those existing in other European markets, which consist in the buying and selling of exchange on the leading cities of Europe, but principally on London, and often on Paris. Besides, the military pay department is constantly in the market, offering short-sight drafts on the British treasury, London, in exchange for Spanish and British money.

Bankers and commercial firms established in Gibraltar also buy and sell exchange, and are often disposed to advance on merchandise, ordered from abroad by speculators and others engaged in the importation of cereals into the neighboring Spanish towns and seaports, through the medium of a fair commission.

SHIPPING FACILITIES.

Frequent and convenient facilities are also afforded for importing to this port from New York flour and wheat by steamships belonging to the North German Lloyds, the British Anchor, the Florio-Rubattino, and Phelps steam lines. They have no fixed days of departure, but furnish the means

for constantly supplying this market with every description of American produce required.

These steamships generally accept cargo on freight at reasonable rates.

OBSTACLES TO TRADE.

No obstacles exist in the way of increasing the trade in American flour beyond the fluctuations which usually occur in general commerce, through glutted markets, limited demand, and depressed condition of trade; also, on the advance or decline in the rates of exchange, incidents which invariably transpire throughout the commercial world.

A large quantity of the flour imported into Gibraltar is sold for the neighboring Spanish district, but, as the stocks of American flour usually kept on hand in this market generally exceed the demands for it, only an increased export demand for supplying the neighboring Spanish towns and seaports could, in my opinion, be the means of extending the business for American flour at this port; but as this could only be attained by a considerable decrease on the present ruling duties levied by Spain on all foreign importations of flour, I do not see any likelihood for such a result.

DUTIES.

Gibraltar being a free port no duties of any description are levied on flour or wheat imported.

HORATIO J. SPRAGUE,
Consul.

GIBRALTAR, *January 12, 1894.*

BELFAST.

INTRODUCTION.

In order to get a report as complete as possible, I have had the consular agents at Londonderry, Lurgan, and Ballymena gather all the information practicable in their immediate territory. In the preparation of the report millers, wholesale and retail grocers, commission merchants, bakers, and consumers have been interrogated, their answers noted and sifted, and that which seemed of value to the American trade retained.

STANDARD OF LIVING.

Though the standard of living in this district is inferior to that of people in corresponding conditions in the United States, it is superior to that of any other port of Europe outside of Great Britain, and is even superior, in the matter of breadstuffs, to most sections of England and Scotland. This is particularly true of the working classes in the manufacturing cities of Belfast, Ballymena, Lurgan, Portadown, Newtownards, Coleraine, and Londonderry; while the farming classes are close followers. This consular district has

within its confines many large and prosperous industries whose wage-earners receive better pay than elsewhere in Europe, Great Britain excepted. In the main the land is fertile and highly cultivated. The inhabitants are industrious and intelligent, having the best of highways, frequent railways, and coastwise facilities for intercommunication. The markets for the exchange of produce and merchandise are unexcelled. The inhabitants are now and have been for some years consuming American flour in large quantities. So extensive has its importation become that a large number of mills have been compelled to quit milling. According to the statement of one miller, the unoperated mills are 33 per cent of the whole number. The patent processes were introduced, but there was not sufficient demand for the offal; besides, flour in sacks from the United States could be imported cheaper than wheat. The mills now running are mostly on straight and low-grade flour. In short, American flour is the favorite, and more of it is used than all other flours combined.

QUALITY OF FLOUR USED.

There are three grades of flour coming into this district, viz, "patents," "straights," and "low grades," the last being used chiefly for feed. In the larger cities, where competition is keenest, the patents are in general use. According to the statement of several bakers, the patents vary considerably in quality, and, as business success depends almost entirely on the quality of the bread, the most intelligent and careful discrimination is necessary in the selection of flour. They aim to get the best patents from both spring and winter wheat. It is difficult to sell any but the best grades of American flour in Belfast, which is a large distributing point as well as a large consumer. Its bakers and dealers have the reputation of being more exacting than those of any other section in the Kingdom. In the smaller towns and the country, where there is little or no competition and where home-made bread is more in use, the people are still satisfied in the main with the straight grades and are willing to subordinate whiteness and firmness to strength and economy. I may remark here that there is a growing impression that the American patents are not up to the standard of former years. Some of the bakers state that the quality is sacrificed to quantity, and, instead of 50 per cent of patent as formerly, there is now 60 to 70 per cent. Others attribute the alleged deterioration to loss of productive power in the soil. One baker said that he was mixing Hungarian flour with American in order to keep up the quality. If the American miller wants to retain this excellent market, he must guard against any falling off in quality, for there is no denying the fact that whenever the price and quality of flour in any other section of the world compare favorably with that of the United States there will be strong influences urged to change the base of supplies. British interests are constantly and indefatigably seeking markets for the vast output of their manufactured articles and the employment of their great merchant marine, and if they can discover a new market for an exchange of their manufactured goods for wheat and flour, they will avail themselves of it.

IMPORTS OF FLOUR AND WHEAT.

The imports of flour and wheat into Belfast and Londonderry during the years 1891–'93 were as follows:

Imports of flour into Belfast and Londonderry.

From—	1891.	1892.	1893.
Belfast.	*Tons.*	*Tons.*	*Tons.*
United States	24,806	34,975	48,662
Great Britain*	22,116	24,832	18,695
Germany	30	.....	10
Total	46,952	59,807	67,367
Londonderry.			
United States	3,554	3,398	5,619
Great Britain*	17,941	24,791	20,569
Total	21,495	28,189	26,188
Grand total	68,447	87,996	93,555

*The imports from Great Britain have already been accounted for at the ports of original import (being foreign products) and are inserted in this table to show the imports at Belfast and Londonderry from all sources.

Imports of wheat into Belfast and Londonderry.

From—	1891.	1892.	1893.
Belfast.	*Tons.*	*Tons.*	*Tons.*
New Zealand	1,794	.....	.....
India	26,044	12,810	16,104
Russia	3,946	.....	1,052
Argentine Republic	371	.....	6,345
Roumania	8,467	2,523	.....
Australia	2,310	.....	2,433
United States	12,105	12,066	18,814
Great Britain*	20,310	22,718	17,491
France	50	355	422
Chile	.....	9,683	3,144
Total	75,397	60,155	65,805
Londonderry.			
United States	1,747	5,308	2,876
Great Britain*	6,286	5,861	2,483
Total	8,033	11,169	5,359
Grand total	83,430	71,324	71,164

*The imports from Great Britain have already been accounted for at the ports of original import (being foreign products) and are inserted in this table to show the imports at Belfast and Londonderry from all sources.

Outside of American, Hungarian is the only other foreign flour imported into this consular district. The amount of Hungarian is estimated to be about one per cent of the total consumption. The reason assigned for the small quantity is the high price, the best grade commanding one-third to one-half of a cent more per pound than the best American patents.

EXCHANGE FACILITIES.

Exchange facilities are excellent. Banking institutions with large capital and low rates of interest are numerous and have their correspondents or agents in most of the larger cities of the United States. Mail conveniences are unexcelled, distance considered. Triweekly departures of the mails on the fastest ocean liners are the rule, while it often occurs that but twenty-four or thirty-six hours elapse between departures. Seven lines of cable, owned by five different companies, with moderate rates, cover emergency needs. The two peoples being of the same tongue, mistakes or misunderstandings are of rare occurrence, conditions which traders appreciate in their dealings with each other. If the decimal system were substituted for the pounds, shillings, and pence, the facilities for monetary exchange would be perfect.

SHIPPING FACILITIES.

Shipping facilities are very good and probably not excelled by any other port in the Kingdom, outside of Liverpool. There is at present one line of steamships (the Lord line) owned here which is devoted almost exclusively to the carrying of flour and provisions from the United States, while other lines owned here have occasional charters for some of their steamers for cargoes of flour. At Londonderry, from which point the northwest of Ireland as far as Sligo largely draws its supply, the shipping facilities are equally good, as Glasgow and Liverpool lines of steamships touch at Moville (some 16 miles from Londonderry) weekly or oftener, while ships laden with wheat and flour from the Pacific coast of the United States discharge their cargoes at the ample and convenient quays of that city.

OBSTACLES TO TRADE.

The information is somewhat conflicting, but in the main favorable to extension. For instance, Consular Agent Magahan, at Lurgan, reports:

American flours are pushing the home-made flours out of use very fast, and local merchants, however unwilling, are compelled to use them. Home millers can not approach the finer grades of American flour; but in the lower grades they have the advantage, as American cheap flours are very poor. The consumption of American flour increases, and of home-made flour decreases, every year.

Consular Agent Rodgers, at Londonderry, draws different conclusions from the present conditions in his neighborhood, but I think they are only temporary. He reports:

We have had some very heavy failures to record during the past three months, amounting, as nearly as I can ascertain, in the aggregate to $1,200,000. This has been brought about chiefly by overimporting on a continually falling market, entailing heavy losses on each cargo and being unable to dispose of what was brought in. It will be understood what position this port is in with regard to the flour trade when it is reported to me that there are upwards of 100,000 packages of flour warehoused here, most of which has been in store for nearly twelve months. I am therefore afraid that the prospects of extending the flour and wheat trade under the present depressed state of affairs is not of a promising nature, but we hope that when the spring opens trade will revive both in this country and in the United States.

In the city of Belfast and in the adjacent territory which it supplies the situation may be summed up thus: American flour is the avorite, and the demand is regularly increasing, as the tabulated statement plainly shows. The quantity imported in 1893 was double that imported in 1891. Some obstacles exist, one of the most important being the excellent quality of the wheat now coming from India. Although this arrives very dirty and has to be washed, it is very hard and dry. Even after washing (on an average one cwt. of dirt per ton has to be removed) it weighs out 21 cwts. per ton, on account of the moisture absorbed. The millers, importers, and commission agents also complain that the grading of American flour and wheat has gone down in the last few years. In this connection, it seems proper to note the complaints of consignees, in hopes that if possible they may be removed. One is, the damaged condition of the flour upon arrival, the bags not being strong enough to stand the wear and tear of handling nor tight enough to prevent the flour from being affected by the proximity *in transitu* of strong-smelling commodities.

Another complaint, which certainly deserves the careful consideration of all millers, consignors, and shippers, for considerable friction is consequent, is that there is lacking the necessary practical interest in the safe and prompt delivery of the merchandise to the ultimate carrier. At present, it is claimed, the shipper loses all interest in the goods as soon as he gets his bill of lading signed and his invoice discounted. If the merchandise be side tracked and delayed *in transitu*, or if there be a shortage or damage, all of which frequently occur, there appears to be no redress, notwithstanding constant and persistent efforts to that end. A Belfast commission firm informs me that they are compelled to keep a department devoted exclusively to the business of tracing the carrier who is responsible for shortage or damage, or both, but with indifferent success, because of the difficulty of fixing responsibility. The annoyance and discouragement arising from delays and losses, according to my informants, are such that if any other country could produce the same quality at corresponding prices the United States would be in imminent peril of losing their prestige in the flour trade.

A remedy is suggested in a federal statute, whereby the bill of lading can be so worded that the original carrier be held responsible for the safe and prompt delivery of the merchandise, under certain modifications, such as come under the head of unavoidables, etc., until in the possession of the final carrier. Each carrier would then insure himself against loss by seeing that the merchandise was received in good order. With such safeguards attending the transportation of merchandise, it is claimed that our foreign markets would increase and the demand for the American product become greatly enlarged.

TRADE OUTLOOK.

The prospects for doing a more extensive business in this consular district are conditional. The business already done is exceedingly large, being about 60 per cent of the whole. The trade is pushed with intelligence and

vigor, and necessarily it will be harder work to capture any portion of the remaining 40 per cent of trade than it was to capture a large part of that now held. I believe, however, that if conditions remain favorable and the trade is pushed, a slice of it may be added to the already large bulk. The claim is being advanced in some quarters that the millers are so improving their mills by the introduction of new machinery that they can make almost, if not quite, as good flour as the best American brands, and that the Indian, Russian, and South American wheats, being cheaper and of equal quality, are coming more in demand. There are those who say that trade in both wheat and flour from the United States is more likely to decrease than increase, and that eventually nearly the whole supply will be obtained from other countries. I think I am safe in saying, however, that the higher grades of American flour "have the call." The preponderance of opinion is that, prices being equal, the American flour is the best, Hungarian excepted. More prosperous times in the United States will make the times more prosperous here. The wage-earner is the largest consumer of American flour, beef, pork, and produce, so that no work means no bread. Increase of population is slow, and no increase of trade need be expected from that cause. Great increase in the consumption of American flour need hardly be expected; but what is to the point, and which is of vital importance, is how to maintain and preserve the present very extensive trade against the constant, earnest, and united efforts of all other wheat-growing countries. These countries are abetted by the Irish millers and capitalists, whose energies and natural ambition are devoted to the restoration of this lucrative source of wealth and to supply work to many idle hands. American millers now have a firm grip on the trade. As experienced and astute men of business, they ought to study and provide the best means of holding and tightening their grip.

JAMES B. TANEY,

BELFAST, *February 6, 1894.* *Consul.*

BRISTOL.

Of the total importation of breadstuffs into the United Kingdom during the harvest year ending July 31, 1893, 31 per cent (8,300,000 sacks of 280 pounds) was in the form of flour. The percentages of the harvest years 1891–'92, 1890–'91, 1889–'90, and 1888–'89 were 28, 25, 28, and 25, respectively. It will be apparent from these figures that there was a large increase in the import of flour last year—an increase the more remarkable as transportation rates were very low and there was consequently no special inducement to bring the flour and leave the bran behind. The increase has been entirely in the imports from the United States; and it is believed in the trade here that a considerable proportion has been sent forward with the certainty that the sale would not cover bare cost, freight, and charges. One explanation of shipments made under these circumstances is that it pays an

American miller, whose output is in excess of local or domestic demands, better to ship his surplus abroad at a nominal loss than to reduce output.

During the last two years nearly 70 per cent of the breadstuffs imported into the United Kingdom came from the United States, while Russia, Roumania, and the Mediterranean may be credited with 10 per cent and India and the southern hemisphere with the remaining 20 per cent.

Seven-eighths of the flour imported into the United Kingdom during the harvest year 1892–'93 was supplied by the United States.

As will be seen by the tables following, kindly prepared at my request by Mr. Girdlestone, secretary and general manager of the Bristol docks, nearly 60,000 tons of flour were imported into Bristol from the United States during the year ending June 30, 1893. This vast quantity was all marketed in those contiguous districts for which Bristol is the distributing center, including the populous coal and iron districts of South Wales. In the south and west of England and in South Wales American flour has practically no competitor other than the product of the home millers. The import from Canada is inconsiderable, and only a nominal quantity of Hungarian flour comes into the district. To a certain extent, no doubt, the conditions of surplusage, freights, etc., operate with equal force upon wheat and flour. When there is a production largely in excess of domestic requirements, there is a large export of the two; but it is nevertheless true to a considerable extent that the shipment of flour means the opening up and maintaining a permanent market for a manufactured product—a product which will continue to be supplied, even after a diminished harvest shall have materially lessened the exports of wheat. The United States may be said, in the light of the statistics of the last few years, to have established a firm and lasting market for flour in the United Kingdom.

It should, however, be carefully noted by millers and shippers that a considerable change, during the past two years of low prices and oversupplies, has taken place in the taste of consumers. It has been the practice, until the last two years, for our millers to ship abroad their low-grade flours, such as "Spring Second Bakers" and "Winter Households," marketing their higher grades at home. Lately, however, they have been sending high-grade flours in such quantities as to weigh down the price to unprecedentedly low figures. The result is, so far as Bristol and the west of England are concerned, that the public taste has been educated up to a far higher grade of flour than it has been accustomed to in the past. The people generally have had little or no advantage in the price of the loaf (except in very poor districts). The quartern (4-pound) loaf sells to-day for 10 or 12 cents, just as it did five and ten years ago; but in quality it is quite a different thing. The dark, close, heavy, loggy loaf is a thing of the past. The loaf is now made for the average consumer from a straight or a low patent flour. Five years ago ordinary bakers' flour would have been used. Two years ago the price of this flour was $7.75 per sack of 280 pounds. Now, with the drop in the market and the different conditions in the public taste, it sells with

difficulty at $4.12. If the conditions of production and distribution alter in the future, so that our millers have no longer such great surplusages of high-grade flours, they will no doubt recur to the original—I may almost say normal—practice of sending seconds to Bristol. They will find it unsalable at any price; the public will not have it.

It is the great exception for people here to bake at home. Even the villages and farmhouses depend upon the baker's cart. Ovens in houses are not adapted to baking, and the custom of a most conservative people is against it. The baker, having now supplied for some time a much more inviting loaf than was the practice in the past, is bound to maintain the quality. The American miller has long been familiar with the fact that the west of England would take a very low grade of flour, and I draw his special and particular attention to the changed conditions now obtaining.

The bulk of the flour imported comes in 140-pound sacks; a small quantity comes in 280-pound sacks. The barrel has gone quite out of favor.

At the present moment the advantage of price in favor of American flour over a similar grade of English is about 60 cents in 280 pounds. It will be wondered why, under these circumstances, English millers can market their output at all. The reason lies in the conditions under which the trade is carried on. The bakers throughout the west of England are, as a rule, small, with limited output and small capital, and they need credit and the cheap delivery of small quantities. They are not in a position, many of them, even to avail themselves of the reduced 2 and 4 ton railway rates; and they find it necessary to deal with local millers, who supply them in small quantities as desired, delivered free and on credit. Representatives of these mills call upon them regularly for orders and to collect accounts. Hence the necessity and convenience of continuing to deal with English millers. In the north, and particularly in Scotland and Glasgow, the bakers are more concentrated and have a large capital and a large output. They are therefore in a position to avail themselves of the cheapest market, and the result is apparent in an increased proportionate consumption of American flour.

No doubt throughout the whole country millers find it to their advantage to purchase American flour to mix with their own product, thus cheapening cost of production.

The old-time method of grading in this district was derived from the color of the string that tied the sack. "Plain-tie" still continues as a trade term, though such a grade would now as often be called "Country" or "Fine." "Blue-tie" and "Red-tie" are terms seldom met with, and "Patent" or "Superfine" have superseded them.

The import trade at Bristol and Gloucester is conducted through brokers and importers. The bulk of the flour comes C. I. F., and the broker sells to the importer and gets his commission. A certain percentage—perhaps 10 per cent—comes on consignment. I have not been able to find a single instance in which large consumers, such as public institutions, hotels, large millers, or large bakers, have established a direct and regular trade with the

American exporter. I do not see any reason why large American millers properly represented in this country should not tender for consumers who buy by contract, and thus establish a regular trade directly with the consumer.

There are regular lines of steamers plying between New York and Bristol, and chartered steamers are constantly entering the port from Baltimore, Philadelphia, and other ports. The grain trade is a very important trade in Bristol, and every possible facility is freely accorded it by municipal and dock authorities.

Imports of flour into Bristol (years ending June 30).

From—	1891.	1892.	1893.
United States:	*Tons.*	*Tons.*	*Tons.*
New York	29,990	32,768	40,622
Baltimore	4,071	5,979	8,605
Portland	1,419	328	.....
Philadelphia	.....	3,403	10,081
Tacoma	.....	2,250	.....
Total	35,480	43,728	59,308
Canada (Montreal)	1,372	2,330	2,406
Grand total	36,852	46,158	61,714

Imports of wheat at Bristol (years ending June 30).

From—	1891.	1892.	1893.
	Cwts.	*Cwts.*	*Cwts.*
Russian and other European ports	1,481,463	609,718	614,448
United States:			
Astoria	48,790	.....	48,422
Boston	28,498	74,430	52,426
Baltimore	21,424	129,021	275,533
New York	829,321	2,549,658	1,246,991
Philadelphia	.....	47,101	544,480
Portland	192,948	316,380	186,360
San Francisco	40,164	71,808	.....
Seattle	44,320	.....	.....
Tacoma	221,393	15,571	204,892
Total from United States	1,427,058	3,203,769	2,358,034
South America:			
Buenos Ayres	.....	35,600	.....
La Plata	.....	.....	26,620
San Antonio	.....	.....	460
Talcahuano	40,714	286,422	118,524
Rosario	153,003	37,448	174,206
Total from South America	193,717	359,470	482,730
Canada (Montreal)	162,202	732,411	669,588
Australia and New Zealand	123,744	.....	24,950
India	.....	73,997	.....
Grand total	3,388,184	4,979,365	4,340,750

LORIN A. LATHROP,
Consul.

BRISTOL, *March 1, 1894.*

LEEDS.

STANDARD OF LIVING.

The standard of living is rather high, the laboring classes being composed very largely of miners and mechanics, who get good rates of wages; and, as flour is so cheap now, only the better qualities are used. American flour is not used here for domestic purposes. There is no objection, I think, to the use of American flour of the better grades; but, as stated below, none is brought here, the wholesale flour business being in the hands of millers, who naturally push the use of their own flour.

QUALITY OF FLOUR USED.

A high grade of flour is used, but only a low grade of American flour comes here. It is used for mixing food for cattle; it is not used in this district for domestic purposes at all.

IMPORTS OF FLOUR AND WHEAT.

Statistics regarding the import of American flour into this district are not available.

American wheat is very largely imported into the district, but no definite information can be obtained as to the amount. American spring wheat is largely used to mix with California and India wheat, to give the flour gluten or "rising" power.

The quantity of flour imported from other countries is almost nil. Some Hungarian is imported, but in a very small proportion.

Wheat comes from California, Australia, and India very largely. About three parts of foreign to one of English are used in this district.

TRADE OUTLOOK.

I do not think there is a very good prospect for the enlargement of the trade here in American flour. There are large mills owned by wealthy persons and companies who control the flour trade, supplying all the retail dealers and bakers. There are no wholesale flour dealers in Leeds.

NORFLEET HARRIS,
Consul.

LEEDS, *March 6, 1894.*

LIVERPOOL.

STANDARD OF LIVING.

The standard of living in the district of Liverpool is fully up to the average of the United Kingdom—about 5¾ bushels of wheat per head.

The better qualities of flour are most used.

IMPORTS OF WHEAT AND FLOUR.

The quantities of American wheat and wheat flour imported into this district during the years ending June 30, 1891, 1892, and 1893, were as follows, in cwts. of 112 pounds each:

From—	1891.	1892	1893.
Wheat.	*Cwts.*	*Cwts.*	*Cwts.*
Atlantic ports	2,367,006	8,213,328	10,507,051
Pacific ports	3,399,325	1,362,332	2,242,754
Total	5,766,331	9,575,760	12,749,805
Wheat flour.			
Atlantic ports	2,190,394	3,114,978	3,309,155
Pacific ports	369,486	128,556	177,410
Total	2,559,880	3,243,534	3,486,565

Quantities of wheat imported from other countries.

Countries.	1891.	1892.	1893.
	Cwts.	*Cwts.*	*Cwts.*
Russia (southern)	2,025,666	734,215	491,507
Germany	.....	1,200	.....
Belgium	400	.....	.....
France	2,379	20,938	9,953
Italy	.....	.....	1,000
Austrian territories	20	.....	.....
Malta	.....	890	.....
Roumania	967,022	.....	.....
Turkey:			
European	20,785	10,659	5,716
Asiatic	157,428	44,514	35,418
Cyprus	80	.....	.....
Egypt	422,261	563,884	1,000
Morocco	1,100	.....	6,000
India:			
Bombay	4,307,914	5,606,005	2,532,223
Bengal	125,716	503,593	215,507
New Zealand	.....	.....	16,445
Canada	573,116	1,198,989	1,603,247
Mexico	.....	6,051	.....
Colombia	8,000	.....	.....
Chile	162,488	339,064	697,970
Brazil	.....	580	.....
Uruguay	6,000	.....	.....
Argentine Republic	1,775,857	817,868	1,391,468
Total from other countries	10,556,232	9,848,450	7,007,454
Total from the United States	5,766,331	9,575,760	12,749,805
Grand total	16,322,563	19,424,210	19,757,259

Quantities of wheat flour imported from other countries.

Countries.	1891.	1892.	1893.
	Cwts.	*Cwts.*	*Cwts.*
Russia (southern)	124	.....	.....
Germany	24,709	12,600	5,991
Holland	.....	.....	180
Belgium	952	408	1,558
France	.....	6	75
Spain	.....	1,400	.....
Gibraltar	.....	2	1,165
Italy	395	6,010	1,940
Austrian territories	540,919	321,788	367,542
Turkey:			
European	.....	250	.....
Asiatic	.....	.....	2,476
Egypt	1,758	667	720
Bombay	3,800	40	3
Canada	217,950	190,396	402,911
Newfoundland	92	.....	734
Chile	9,332	29,620	11,936
Brazil	26,376	.....	.....
Argentine Republic	7,308	2,737	5,609
Total from other countries	833,235	565,924	802,839
Total from the United States	2,559,880	3,243,534	3,486,565
Grand total	3,393,115	3,809,458	4,289,404

EXCHANGE AND SHIPPING FACILITIES.

With regard to the facilities for monetary exchange, the English banks send out representatives to the United States for the purpose of buying exchange, and some London provincial and Scotch banks have resident agents there for that purpose.

It is scarcely necessary to say anything about shipping between the United States and this port. In regard to through bills of lading, the trade says they should be signed jointly and severally by the carriers and not, as at present, jointly but not severally. The result when damage occurs under the present form of bill of lading is that the consignees can not, unless in exceptional cases, fix the liability on a particular carrier; but if the form of the bill of lading was altered as suggested, this evil would be remedied.

OBSTACLES TO TRADE.

Liverpool is considered an expensive port for cargo, the port and railway charges discriminating against it; for example, the railway freight on a ton of merchandise from here to Birmingham is $2.73, whereas from Bristol to Birmingham—about the same distance—it is only $2.06. This can only be righted by competition. Otherwise there are few obstacles to the extension of trade beyond the natural laws of competition with home-made flour. Distance, with consequent apparently insurmountable delays in transit, is a less serious hindrance than, as is claimed by English millers, the growing tendency of American millers to lengthen their patents, viz, extend the number of their processes under patent, and thereby increase their percentage, and

consequently decrease the quality, and so degrade their whole output. English millers, on the other hand, claim to have steadily aimed at improvement in all grades, and they now assert their product to be as much superior as formerly it was inferior to that of their great rivals in the United States. It is said by the Miller's Association in Liverpool that local mills now command at least 80 per cent of the trade, against 25 per cent four years ago.* I have been unable to obtain any exact data to verify this, and give it herein as the opinion of local dealers. Excellence and regularity in quality are the indispensable adjuncts of a prosperous trade in any flour. In these respects the trade here claim that American flour has of late years deteriorated, and that the bakers' grades are quite too low for general consumption. I am not prepared to concede this, not being an expert in its manufacture; but American millers should know concerning the truth or falsity of this statement, and, should American flour have deteriorated in any way, the ingenuity and enterprise of the millers of the United States will soon bring it to a higher standard of excellence than it has ever had, I have no doubt. I submit herein the statements of the English dealers, given above, to stimulate our dealers to higher perfection in the manufacture of flour, without indorsing them as true myself.

TRADE OUTLOOK.

With reference to the prospects for doing a more extensive business, that entirely depends on the crops in the United States and whether the millers can compete with their competitors in other countries. The system of consignments should be discouraged, and millers new at the business should be warned to hold their stocks until sales are effected, and not be led by unscrupulous travelers into consigning them in expectation of profitable sales. The system here is considered pernicious to the trade generally.

JAMES E. NEAL,
Consul.

LIVERPOOL, *February 12, 1894.*

MANCHESTER.

STANDARD OF LIVING.

The standard of living in the Manchester district is higher than that of most places in England. American flour, I am informed, is not generally liked, being considered too dry in the loaf. Bakers and their customers prefer local millers' flour mixed with Hungarian, the bread made from which will retain its moisture longer than that made from American flour.

* The official figures of the imports of American flour into Liverpool, as given by our consul in the preceding part of this report is answer enough to this assertion. In 1891 the imports of American flour amounted to 2,559,880 cwts. and in 1893 to 3,486,565 cwts., an increase of over 36 per cent.

QUALITY OF FLOUR USED.

About equal quantities of the local grades known as "Patent" and "XX" are used in this district to produce the two qualities of bread which are in request. The first-mentioned flour is usually about the same price in Manchester as American winter patents, and the "XX" $1.09 to $1.21 per 280 pounds lower.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange at this port are equal to those of any provincial city in the Kingdom.

Since the 1st of January the Manchester Ship Canal has been open for traffic, in addition to the four principal railways centering at this port. The charge for tolls and wharfage on flour from Eastham (the mouth of the canal) to the Manchester docks is 73 cents per ton, to which must be added 2 cents per ton per mile for local delivery.

Prior to the opening of the Manchester Ship Canal all flour had to be transshipped at Liverpool and sent on to Manchester by rail or the Bridgewater Canal barges. There are thus far no direct steamers from the United States using the Manchester Ship Canal, with the exception of one or two with cotton (and a small quantity of grain) from Galveston and New Orleans, which, of course, are not available for the flour trade. One or two small shipments of American grain have been received here, but no flour as yet.

As Manchester was not created a port for customs purposes until January 1, 1894, there are no statistics available as to the importation of American flour and wheat into this district during the years 1891, 1892, and 1893.

OBSTACLES TO TRADE.

The chief obstacle in the way of the extension of trade in American flour here is, I am told, the unsuitable character of the article itself. Kansas flours have been somewhat better taken, as they possess good flavor and the bread from them retains its moisture, but of late the quality has been irregular and the price too high.

TRADE OUTLOOK.

Mr. J. Bolton, of the firm of Johnson & Bolton, the principal flour merchants in this city doing a direct business with the United States, to whom I am indebted for the greater part of the information contained in this report, says:

> If millers will make an article possessing a good flavor, and the bread from which will retain its moisture, taking especial care to keep the quality regular, and if along with this there can be arranged a quick transit service by direct steamers via canal, there is every probability of an increased sale of American flour. It would be necessary to guard against such delays as are common at present in the shipments to Liverpool, so that buyers might depend upon receiving their goods within a reasonable time after shipment from the mill.

To this I would add that Manchester is the center of the largest and most populous industrial area in Europe, numbering upwards of 7,000,000

people. This great working community includes one hundred and fifty-one towns, each of which is engaged in skilled labor. Eleven of these towns have each a population exceeding 100,000, and one hundred of them have each more than 10,000 inhabitants.

WILLIAM F. GRINNELL,
Consul.

MANCHESTER, *March 5, 1894.*

DUNDEE.

STANDARD OF LIVING.

The population of this city is about 160,000, of whom it is estimated that 70,000 belong to the working classes, including those engaged in industrial, domestic, agricultural, and fishing pursuits. The standard of living varies according to the circumstances of the individual or family, and is probably lower than in most cities of a similar size. On account of the estimation in which American flour is held, by reason of its excellent quality and cheapness, I am informed by persons in the trade that the greater portion of the flour consumed in this district is American, and even of the flour milled in the district nearly one-half is manufactured from American wheat.

QUALITY OF FLOUR USED.

The quality of flour most used is that known in the trade as "straights" or "bakers."

IMPORTS OF FLOUR AND WHEAT.

The following table shows the quantity of wheat flour and wheat imported into Dundee during the fiscal years mentioned.

Year.	Imported from—		
	United States.	Other countries.	Total.
Wheat flour.	*Tons.*	*Tons.*	*Tons.*
1891	.....	3,106	3,106
1892	128	942	1,070
1893	2,604	1,618	4,222
Wheat.			
1891	425	4,237	4,662
1892	2,116	1,028	3,144
1893	6,619	.....	6,619

Of the 1,618 tons of flour imported in 1893 from countries other than the United States, 1,057 tons came from Montreal in vessels bringing Canadian cattle, but, owing to the restrictions imposed by the British Government upon the importation of cattle from Canada, no flour is at present being received in this way.

EXCHANGE AND SHIPPING FACILITIES.

The usual practice is for shippers to draw at sixty days' sight, the draft being accompanied by the invoice and bill of lading, so that it is impossible for the consignee to get his goods without first making payment. The facilities for monetary exchange are ample.

The only direct steamers from the United States are those of the Arrow line, which ply between New York, Leith, and Dundee. They have no regular times for sailing, and only do so to meet the requirements of the trade. Most of the American wheat flour imported comes to Hull, whence it is brought by steamer to Dundee.

OBSTACLES TO TRADE.

No obstacles in the way of extension of trade in American flour are known to exist, other than the competition with other countries.

TRADE OUTLOOK.

In my opinion the prospects for doing a more extensive business are not good, for the very satisfactory reason that the United States at present have nearly the whole trade.

JOHN M. SAVAGE,
Acting Consul.

DUNDEE, *March 26, 1894.*

FALMOUTH.

STANDARD OF LIVING.

The standard of living in this district, the population of which is composed principally of miners, is fair—good, plain food of rather above the average quality being consumed.

QUALITY OF FLOUR USED.

In flour especially four-fifths of the consumption is of the finest quality, the greater portion of which is of English make.

IMPORTS OF FLOUR AND WHEAT.

No American wheat or flour was imported in 1891 or 1892. In 1893 one cargo of American flour and wheat (amount of each not ascertained) was received by an 800-ton vessel. In 1893 two other cargoes of Oregon wheat were received, per 765-ton and 1,400-ton ships.

In 1891 one cargo of wheat from each of the following countries was imported: Turkey, New Zealand, Russia, Chile, and the Argentine Republic. The only wheat received in 1892, other than the American wheat before

noted, was one cargo from the Argentine Republic. No wheat flour other than American was imported during the years under consideration.

EXCHANGE AND SHIPPING FACILITIES.

Exchange facilities are the same as throughout Great Britain. There are four banks at Falmouth.

We have capacious docks, where vessels of 22 feet draft can discharge at all tides direct into the warehouses on the wharf.

OBSTACLES TO TRADE.

American flour being mostly made from one class of wheat does not give such good results, so it is said, as when the wheats of different countries are blended (some kinds giving color, others strength and again others flavor). The obstacles to the extension of the trade are, perhaps, prejudice in favor of English flour and the difficulty in getting bran with American flour at certain seasons of the year, added to the keen competition of local millers.

TRADE OUTLOOK.

There does not, at present, appear to be good ground for anticipating a more extensive business in American flour in this district.

HOWARD FOX,
Consul.

FALMOUTH, *March 10, 1894.*

NEWCASTLE.

Only the highest grade of flour is used here.

The importations of American wheat and wheat flour and Indian corn into the Tyne for the years 1891, 1892, and 1893, from the official reports, were as follows:

Year.	Flour.	Wheat.	Maize.
	Tons.	*Quarters.*	*Quarters.*
1891	1,834	217,595	.....
1892	1,835	160,830	65,391
1893	3,497	228,861	61,482

The quantity from other countries (chiefly from the Baltic and Black Sea ports, India, and South America), from official reports, was as follows:

Year.	Flour.	Wheat.	Maize.
	Tons.	*Quarters.*	*Quarters.*
1891	4,136	37,067	.....
1892	1,448	62,614	17,494
1893	849	73,585	26,953

No suggestion can be offered as to the prospects for doing a more extensive business. There being no duty on wheat or wheat flour, or on any other breadstuffs, no obstacle exists to an extension of this trade here, which is very important and long established. Sources of supply and prices are well known to dealers in Great Britain, and the only question they consider is quality and cost to deliver here.

WM. S. CAMPBELL,
Consul.

NEWCASTLE, *February 15, 1894.*

GIBRALTAR.*

Since the beginning of the present year the importations of flour have already (April 2) reached 39,835 sacks of 140 pounds each, all arriving direct from New York by foreign steamships, chiefly by those belonging to the North German Lloyd Company. Considerable of these supplies of American flour has already been disposed of at retail to meet the local wants of this market, besides supplying the increased demands of the neighboring Spanish district.

The calls for American flour have also extended to Tetuan (Morocco), to which town 2,000 sacks have lately been forwarded, which is somewhat of a novelty.

The present ruling cheapness of flour in the United States, added to the very moderate rates of freight accepted by the German line steamships plying between New York and this port, permits importers to undersell foreign arrivals from England and France.

American supplies seem at this moment to control this market. It is therefore important for those interested in this trade with the United States (if they wish to continue it) that they should bestow every care and attention in the selection of the different kinds and descriptions of flour most suited and salable to avoid any complaints that may arise from difference in the quality of any particular mark or brand, as any discrepancy of the kind might prejudice in future the sale of the article in favor of British and French competition.

Only 1,500 bags of American wheat have been imported during the present year. They have lately arrived from New York on an order from a steam mill company established in a neighboring Spanish village, 3 miles distant from Gibraltar.

It is reported that supplies of Indian hard wheat may soon be expected to arrive at this port on orders from Spain, in which operations residents here are interested.

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* See also p. 366.

It is evident that the Spanish district in the neighborhood of Gibraltar does not now produce sufficient wheat to meet the wants of its population; consequently recourse has to be had from time to time to foreign importations of wheat and flour in spite of the heavy duties levied thereon.

HORATIO J. SPRAGUE,

GIBRALTAR, *April 2, 1894.* *Consul.*

MALTA.

STANDARD OF LIVING.

The standard of living in this island may be considered medium. Even the wealthiest Maltese can not be said to live "generously" in the American sense. The bulk of the population consumes a large quantity of bread and wheaten products, such as macaroni, etc., the Maltese being supposed, by some observers, to make a proportionally much larger use of macaroni than the Neapolitans. Macaroni, vermicelli, etc., are manufactured locally, and are also imported.

As a matter of fact, the people here have eaten and now eat American flour. It is very common to see flour sacks bearing American brands being drayed, or such empty sacks being put to various uses, but owing to the lack of statistics, official or otherwise, in the matter, it is very difficult to say or even guess what proportion of the flour supply of this island is received directly or indirectly from the United States.

QUALITY OF FLOUR USED.

The quality of flour most used is wheaten—one grade for bread-making and finer descriptions for pastry, cakes, etc.

IMPORTS OF FLOUR AND WHEAT.

No statistics regarding the imports of American flour and wheat are available. As goods are received by indirect routes, the ports of transshipment are credited with articles of American origin.

The following were the total importations from all sources during the years ending June 30, 1891, 1892, and 1893.

Year.	Wheat.		Flour, macaroni, etc.	
	Imported.	Exported.	Imported.	Exported.
	Bushels.	*Bushels.*	*Pounds.*	*Pounds.*
1891	976,840	10,488	1,887,375	818,650
1892	1,067,832	38,296	2,248,400	744,100
1893	1,015,664	113,040	5,652,100	966,300

The great difference observable in the last year (1893), as regards the importation of flour, macaroni, etc., is due to the high prices at which stocks of wheat were held in the island in 1893, which enabled the importers to compete successfully with the local millers.

DUTIES.

The import duty on flour is 6*s*. per cantaro ($1.46 per 175 pounds).

The import duty on wheat is 10*s*. per quarter, equal to 30 cents per bushel.

EXCHANGE AND SHIPPING FACILITIES.

There is no direct monetary exchange with any of the American centers. In any operations that take place a credit on London or Paris is opened.

There are various ways of shipping goods from New York to Malta, principally via Liverpool; but there is no direct communication. When direct and frequent steamship communication between American and Mediterranean ports, touching at Malta, is established, American wheat flour will not only find a ready sale here, but will at once dominate the market.

OBSTACLES TO TRADE.

The absence of any regular direct communication between American ports and this island and the consequently expensive and lengthy (or tardy) manner in which shipments have to be made at present, are obstacles to the extension of American trade in general with Malta and ports further east, and of the trade in flour in particular. There are now several importers of flour here, and the individual shipments have necessarily become small. Owing to the length of time a shipment from the United States would occupy in reaching this port by present routes, and the constant fluctuations in the product, importers appear to find it more to their advantage to receive their supplies from England, whence a shipment can reach Malta in about ten days from ordering.

Large parcels of flour are occasionally received here from Ibrail, in the Black Sea, a week's voyage to Malta. A shipment of this flour, which appears to meet with favor, has just been received and sold at $1.75 per 100 pounds delivered from the wharf.

TRADE OUTLOOK.

I am of opinion that the prospects for doing a more extensive business in American flour are excellent, provided direct communication—such as I have very briefly outlined in this dispatch, and more fully and urgently advocated in former dispatches to the Department—is established.

The windmills that used to grind all the flour for the inhabitants are now obsolete and the steam mills that succeeded them are few in number and of no commercial importance.

This island has 175,000 inhabitants, and, in addition, a very large garrison of British troops. It is the headquarters of the British Mediterranean fleet, and it is the largest coaling and provisioning port in this sea.

JOHN WORTHINGTON,
Consul.

MALTA, *April 14, 1894.*

MEXICO.

CHIHUAHUA.

The standard of living among wealthy people is very good, but with the poor or *peon* class it is very poor—in fact, it is the extremes of luxury and abject poverty.

The people here are ready to eat American flour, but the duties are prohibitive, being 10 cents per kilogram, or about 4 cents per pound. Adding to this first cost and freights, with exchange at 90 per cent, and American flour would cost nearly 15 cents (Mexican silver) per pound.

No American flour is used here. This district grows its own wheat and grinds its own flour. There are several flour mills of American manufacture, run and owned by Americans, making as good a grade of flour as can be made anywhere. These mills have a capacity of from 100 to 200 barrels daily, and they make all the flour used here.

As to questions regarding the quantity of flour and wheat introduced for the years ending June 30, 1891, 1892, and 1893, as far as I can ascertain there has not been a single pound from any country.

R. ANDERSON,
Vice-Consul.

CHIHUAHUA, *February 5, 1894.*

LA PAZ.

Although the population comprising this consular district does not at present exceed 30,000, the appreciation of first-class American flour is quite apparent, but under the existing high-rate tariff its importation is practically prohibited.

Domestic flour from the neighboring State of Sonora, and from the northern portion of this territory is now used entirely, but it is generally found to be coarse and of poor quality.

During the years 1891–'93 the importations of American flour have been too insignificant to furnish any statistical data; but the amount of domestic flour consumed, under a fair estimate, reaches from 150 to 200 tons per month.

Under the tariff of 1856 foreign flour of inferior quality paid $1 per barrel and first class paid $1.50 per barrel. This privilege was conceded only to this territory and the frontiers of the Republic; but when compari-

son is made with the present rates, which are about $10.66 per barrel, it can readily be perceived how American or other foreign flour is excluded.

There is not a flour mill within this district, and consequently no wheat is ever imported.

Monetary exchange is readily obtainable, and facilities for shipment by sea from the United States are good.

The only obstacle to the development of this trade is undoubtedly the high tariff, and unless this is altered there is no prospect for the extension of the market for American flour in this district.

JAS. VIOSCA,
Consul.

LA PAZ, *January 19, 1894.*

MATAMOROS.

STANDARD OF LIVING.

The only diet of the people up to a few years ago was corn and black beans, but owing to the drought (which has been prevailing in this district for four years) merchants were compelled to buy corn largely in American markets. The prices being high, with additional high freights, the people have taken to American wheat flour, which can be laid down here much more cheaply than corn. Still, corn is quite extensively imported and used.

QUALITY OF FLOUR USED.

The qualities of flour exclusively used in this market are: First patent "Royal," E. O. Standard Milling Company, St. Louis; first patent "Royal," Texas Star Flour Mills, Galveston; second patent "Eagle Steam," E. O. Standard Milling Company, St. Louis; second patent "ooo" Texas Star Flour Mills, Galveston; common "Princess," E. O. Standard Milling Company, St. Louis; common "oo," Texas Star Flour Mills, Galveston; and second common "No. 2," Texas Star Flour Mills, Galveston. White flours are preferred to dark ones, even though the latter may be stronger.

IMPORTS OF WHEAT AND FLOUR.

During the year ending June 30, 1891, there were 1,845,113 pounds of American flour imported; in 1892, 1,477,776 pounds; and in 1893, 1,721,411 pounds. These figures are for imports into Matamoros alone. No flour from any other country has been imported into this district.

EXCHANGE FACILITIES.

Merchants experience great difficulty in obtaining monetary exchange, bankers charging at present 90 per cent for American dollars, and, owing to the uncertainty of the silver market, do not even wish to issue exchange, as they have no outlet for their silver and claim that it is accumulating too fast in their vaults. Hides and other products are shipped in return for imports.

SHIPPING FACILITIES.

The shipping facilities in this section are very poor. Merchants have to depend upon a steamship company, whose steamers make a trip about every ten days. A steamer runs between New Orleans, Galveston, and Brazos Santiago. Goods have to be lightered at Brazos to Point Isabel, from which point they are taken by rail to Brownsville, a distance of 22 miles, then reloaded again and taken to the ferry, where they are loaded on flatboats and taken across the Rio Grande River into Mexico. The delivery of goods at this port after arriving at Brazos Santiago oftentimes consumes a week, which makes it very annoying to merchants, as they are never quite sure when they will receive their goods.

TRADE OBSTACLES AND OUTLOOK.

There is at present a project on foot to connect Brownsville and Corpus Christi, Tex., with a railroad line. The completion of this line would undoubtedly increase the American flour trade considerably, as railroad lines from this point would eventually be built connecting with the Mexican main lines, thus opening up a larger field for our breadstuffs. There are no other obstacles in the way of extending the American flour trade. Should railroads be built in this section I feel confident that we would control the Mexican flour trade, although, as I understand, a company has erected an extensive flour plant at Saltillo, Mexico. Still I think that we would have the bulk of the Mexican trade, as the production of cereals in Mexico is very limited.

The demoralized condition of financial affairs, together with the stagnation of the silver market, greatly interferes with establishing a firm basis, as importers are prevented from working freely, not having any certain margin upon which to make their calculations as long as the fluctuations of the currency continue. Still, the importation of American flour will continue, as there is no flour which meets the demand so readily as that produced in the United States, and, if prices continue as they have been, there seems to be no reason why flour from other countries should be imported into this district.

J. BIELENBERG,
Vice-Consul.

MATAMOROS, *January 20, 1894.*

MAZATLAN.

STANDARD OF LIVING.

As great poverty prevails throughout this district, the standard of living is very low. The high contributions levied on all works, manufactories, and agricultural products have compelled those with small capital to retire from business and the farmer to abandon his fields, thus throwing out of employment thousands of poor laborers, whose only way now of making a

living is by bringing firewood from the surrounding forests and selling all they can bring in a day at the low price of from 12 to 25 cents. Out of this pittance they have to pay their house rent and water bill and buy food for themselves and families.

It is a treat for the poor laborer to eat a piece of bread. Their substitute for it is the "tortilla," made of corn. The corn is soaked in water for a few hours, then it is ground to a fine paste on a "metate" (a sort of a mill made out of a curved stone, in the shape of an inclined plane). A little of the paste is taken into the hands and spread out in the shape of a pancake. This done, it is placed in the oven for a few seconds and the "tortilla" is ready to be eaten. Though bread is preferred, few houses—not even those of wealthy families—have done away entirely with the "tortilla."

QUALITY OF FLOUR USED.

In making bread American flour is preferred to any produced in this country, though Colima, Sonora, and Todos Santos manufacture a considerable quantity; the last-mentioned place successfully competes with California flour. The flour most used here is that of Colima and Sonora, it being cheaper than American flour.

AMERICAN FLOUR AND WHEAT.

Strange as it may seem, there is no account kept in the custom-house of the quality, description, or value of goods, wares, and merchandise imported into this port, except for the ensuing fiscal year. The other accounts are sent to Mexico to enable the bureau of statistics to prepare their reports. According to the general tariff, some goods go by measure, some by weight, and others by valuation, and all the information that we can derive at the custom-house is the amount of duty paid on the cargoes. I am therefore unable to give the statistics required. However, I was fortunate enough to see the records for the year ending June 30, 1893, from which I have taken the following figures giving the amount of flour and wheat imported from San Francisco during that year: Flour, 228,926 kilograms; wheat, 18,400 kilograms.

No flour is received here from other countries on account of the high rates of exchange, freight, and duties.

SHIPPING FACILITIES.

There are three monthly steamers from San Francisco to this port—two belonging to the Pacific Mail Steamship Company and one to the Pacific Coast Steamship Company—and several sailing vessels.

OBSTACLES TO TRADE.

The obstacles in the way of the extension of the trade in American flour are high exchange (the Mexican dollar being worth 51¾ cents), high freight rate ($10 per ton), and the enormous import duty of $97 per ton. A ton of flour costs merchants here $154, and they have to retail it for $180.

But for these obstacles the prospects of doing a more extensive business here in American flour would be good.

ARTHUR DE CIMA,
Vice-Consul.

MAZATLAN, *January 31, 1894.*

MEXICO.

There is no reason why the Mexican people should not be ready to eat American flour. Mexican flour, inferiorly milled, is consumed in this city to the extent of $2,200,000 annually. In 1892 the consumption amounted to $2,449,276.

Two kinds of flour are used to about the same extent in this section—*harina flor* (prime flour) and *granillo*, a brown or second grade.

The import duty on wheat is 5 cents per kilogram, and on flour 10 cents per kilogram.

Facilities for monetary exchange are not very extensive. There is much room for improvement. The rates of transportation and commission are higher than in the United States. Banks charge more for American exchange than any other, and offer none other for sale than New York. Spanish exchange is the cheapest and German the next cheapest. An American banking institution having correspondents in every important city of the United States would be desirable, and could do well in this city, and perhaps in other cities of this Republic.

The facilities for shipping from the United States to the city of Mexico are good, but the freight rates are not so favorable as from Europe. Steamship lines deliver European goods at Veracruz and Tampico from 10 to 25 per cent cheaper than similar goods are delivered from the United States.

The high duty is at present the only obstacle in the way of an extensive trade in American flour. There are no prospects for an increased consumption of American flour under the present circumstances. The duties are prohibitory. Mexican flour is selling at from 6 to 8 cents a pound.*

THO. T. CRITTENDEN,
Consul-General.

MEXICO, *January 5, 1894.*

PASO DEL NORTE.

STANDARD OF LIVING.

The standard of living in my consular district, except among a small percentage of the people, who constitute the better class, is not high. In some localities they use considerable American flour, and are ready to use more, provided it can be made cheap enough for them to purchase.

* The consul-general says that he could not obtain any information (no facts or statistics being published) to enable him to answer questions 4, 5, 6, 7, and 8.

QUALITY OF FLOUR USED.

The quality of the flour generally used is of the second or third class.

IMPORTS OF WHEAT AND FLOUR.

The quantity of American wheat and wheat flour imported into and consumed in this district in each of the last three years will be shown by the following tables:

American wheat imports at Paso del Norte during the three years ending June 30, 1893.

Year.	Quantity.		Value in Mexican silver.*
	Packages.	*Bushels.*	
1891	4,617	15,130	$10,637
1892	138	235	387
1893	856	2,665	2,030
Total	5,611	18,030	13,054

*Valued at 83.7 cents on January 1, 1891; at 75 cents on January 1, 1892; at 66.9 cents on October 1, 1892; at 65.6 cents on July 1, 1893, in American gold.

American wheat flour imports at Paso del Norte during the three years ending June 30, 1893.

Year.	Quantity.		Value in Mexican silver.
	Packages.	*Pounds.*	
1891	15,557	879,150	$26,436
1892	14,577	723,475	22,222
1893	16,277	871,290	24,169
Total	46,411	2,463,915	72,827

There were during this period no wheat or flour imported from other countries.

EXCHANGE FACILITIES.

The rates of exchange on principal American cities are very reasonable, and about the same as they are in different parts of the United States on the same points.

SHIPPING FACILITIES.

The facilities for shipping from the United States to this port are first class. El Paso, Tex., which is the United States port immediately opposite Paso del Norte, is reached by four railroads, viz, the Southern Pacific; Atchison, Topeka, and Santa Fé; Texas and Pacific; and Galveston, Harrisburg, and San Antonio. An international railroad bridge connects El Paso with Paso del Norte, and the Mexican Central Railroad extends from here to the city of Mexico.

DUTIES.

As the duty on wheat and wheat flour entering the "free zone"—a strip of country 12½ miles wide extending the full length of the Mexican fron-

tier—is but one-tenth of the duty on the same products imported into the interior, all of the American importation has been confined to the free zone. I therefore conclude that if the Mexican duties on these articles were less there would be more of them imported and consumed.

TRADE OUTLOOK.

The quantity of these products imported from the United States in the future will depend, as it has in the past, first, upon the seasons and Mexico's consequent ability to produce enough wheat for home consumption, and, second, upon the amount of duties levied by Mexico upon American breadstuffs.

THEODORE HUSTON,
Consul.

PASO DEL NORTE, *January 9, 1894.*

PIEDRAS NEGRAS.

STANDARD OF LIVING.

The poorer classes of the people of this part of Mexico have heretofore used mostly corn, preparing it in various ways for food, making, for instance, the "tortilla," "tamallis," hominy, etc. But the use of flour is spreading and gradually taking the place of corn, which has been almost the exclusive food for the lower classes.

The low grade of flour is the quality most used here.

IMPORTS OF FLOUR AND WHEAT.

The quantity of flour imported into this district in 1891, 1892, and 1893 amounted to about 5,000 barrels, 7,000 barrels, and 10,000 barrels, respectively. This wheat flour (all American) was consumed in only that part of the consular district known as the "free zone," which forms a belt about 12¼ miles back into the interior of Mexico from the Rio Grande. If this flour had gone beyond the free zone a higher duty would have had to be paid.

No wheat was imported at this point in the years 1891, 1892, and 1893.

EXCHANGE AND SHIPPING FACILITIES.

Importers of American flour sell their Mexican money for United States currency (gold, silver, or paper), with which they pay for their purchases.

Shipping from the United States to this port is by means of the railway, which gives reasonable satisfaction.

OBSTACLES TO TRADE.

The free zone in this district is the only territory in which American flour is sold, as the tariff is too high to admit of its sale beyond this zone.

There are no prospects for doing a more extensive business in American flour in this country as long as the high duties on flour exist.

There would be no trade or business whatever in American flour in this part of Mexico were it not for the free zone.

JESSE W. SPARKS,
*Consul.**

PIEDRAS NEGRAS, *February 10, 1894.*

SALTILLO.

The quality of flour most used is made from wheat produced in this consular district and ground here by American milling machinery. It is not practicable to import American wheat flour into this district on account of the very high import duties.

As to facilities for monetary exchange, drafts can be purchased on New York. The present rate of exchange is 82 per cent premium for gold.

Goods are shipped by rail via Laredo, Tex., and by steam to Tampico; thence by rail via the Monterey and Mexican Gulf and Mexican National railways.

The obstacles to increased American trade are the high import duties and freight rates.

My opinion is that unless American wheat and flour is placed on the free list there are no prospects for doing any business in American flour in this country. Excellent wheat and flour are produced here very cheaply.

JOHN WOESSNER,
Consul.

SALTILLO, *January 23, 1894.*

VERACRUZ.

The standard of living in this consular district is not very high. Fully three-fourths of the people use corn instead of wheat flour, and the other fourth use a medium grade of flour made at interior points in Mexico.

The quality of flour used is good, but will not compare with the best grades made in the United States.

There was no wheat flour or wheat imported during the years 1891–'93.

The facilities for monetary exchange are good in Veracruz, through which city all business of that nature is done by the whole of this consular district. The National Bank of Mexico and the Bank of London and Mexico each has a branch here, besides which many wholesale houses do a banking business.

* The consul acknowledges his indebtedness to Mr. John Cram, of the firm of J. Cram & Co., Piedras Negras, for much of his information.

The facilities for shipping from the United States to this port are good, the harbor being accessible to vessels of any draft.

The obstacles in the way of the extension of trade in American flour are home production and a prohibitive tariff. In my opinion, there are no prospects of doing any business in American flour, nor will there be any brought in, so long as the duty remains as high as at present. I believe, however, that were this duty removed American flour would sell readily at a small advance in price over the native product.

CHARLES SCHAEFER,
Consul.

VERACRUZ, *February 2, 1894.*

GUATEMALA.

Corn and wheat constitute the standard food of the people; they are ready to eat American flour. The best quality of American flour that is made upon the Pacific coast is in use.

The quantities of American flour imported during the calendar years 1891 and 1892 were 12,238,820 pounds and 14,454,955 pounds, respectively. Statistics for 1893 are not yet compiled. There are no statistics obtainable regarding the imports of wheat, which, if there are any, must be very insignificant.

American is the only flour imported.

The duty on American flour is $5.35 in silver or about $2.65 in gold per barrel. The duty on American wheat is 40 cents (gold) per 100 pounds. The duty is the same on flour and wheat from other countries.

The facilities for monetary exchange are very poor.

The shipping facilities at present are good, owing to the competition between the Pacific Mail Company and the North American Navigation Company.

The obstacles to trade are high duty, high rates of local freights, and high port charges. With no duty on wheat flour, and with other charges materially reduced, the consumption would easily be doubled. At present the consumption is increasing slowly.

D. LYNCH PRINGLE,
Consul-General.

GUATEMALA, *January 10, 1894.*

HONDURAS.

STANDARD OF LIVING.

The standard articles of food in this consular district, so far as bread products are concerned, are Indian corn and wheat flour. The common people prepare from Indian corn a kind of cake called "tortilla," which is the "staff of life" for them. Bread made of wheat flour—which a few years ago was almost unknown—is rapidly increasing in use among all classes of the people. They are not only ready to eat American flour, but they have been eating it, and will continue to do so.

QUALITY OF FLOUR USED.

The quality of flour used ranges from medium to first class, and very little, if any, poor quality is used.

IMPORTS OF FLOUR.

I am entirely unable to answer these questions, because of the lack of statistics, but some estimates may be had later from the various consular agencies in this district, to which I have sent copies of the circular requesting reports. The quantity, I should judge, has been quite considerable for the population of the country. I think that nearly or quite all the flour imported into Honduras comes from the United States.

DUTIES.

American wheat flour is admitted free of duty, but there are some port charges which are nominal. There is no discrimination, wheat flour from any country being free of duty.

American wheat is not imported into this district, as there is not a flour mill in the Republic. Wheat is not even mentioned in the tariff laws.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are not very good. There is a bank at this capital, but it has not established arrangements for exchange to any extent. Some of the merchants arrange their deposits in New York and San Francisco, but the greater part of exchange with the United States is effected through the various American mining companies doing business in the Republic.

This Republic has only one port on the Pacific side. Vessels plying between Panama and San Francisco touch regularly at this port. On the Atlantic side there are three ports of entry, viz, Puerto Cortez, Ceiba, and Truxillo, all of which are in direct communication with American ports.

OBSTACLES TO TRADE.

I know of no obstacles in the way of the extension of trade in American flour in this Republic. The main point for manufacturers of flour to observe is to present their wares, so to speak. Hondurenans are ready to trade with the United States in flour, as well as in everything else, if the manufacturers will cater to their peculiarities and tastes, pack their goods in such a manner that they can be transported, and give reasonable credits—at least as reasonable as other countries offer.

TRADE OUTLOOK.

Nearly or quite all the flour consumed in Honduras comes from the United States, and the extension of its use depends upon the slowly changing tastes of the natives, and the increase in the number of foreign residents. The consumption of flour is increasing, of course, but the increase is slow. If manufacturers would send commercial travelers to these countries—or rather more of them—who would personally present their wares, trade of all kinds could be increased.

JAMES J. PETERSON,
Consul.

TEGUCIGALPA, *March 6, 1894.*

BRITISH HONDURAS.

STANDARD OF LIVING.

The standard of living in this colony is not so high as in the United States, owing to the fact that nearly everything has to be imported, and most of it, especially in the line of meats, comes in cans. American flour is the only wheat flour used in this country, and is readily sold here.

QUALITY OF FLOUR USED.

Flour of all grades is imported, but that most used is a grade known as "Ration," which is supplied to laborers, and, with mess pork (American also), forms their staple food.

IMPORTS OF FLOUR AND WHEAT.

There were 12,101 barrels of American flour imported into this colony during the year ending June 30, 1891, 17,512 barrels in 1892, and 18,092 barrels in 1893.

No wheat flour is imported from any other country than the United States.

No wheat is imported into this country, as there are no mills.

DUTIES.

The import duty on flour is 25 cents per barrel.

If wheat were imported into this colony it would be subject to a duty of 10 per cent ad valorem.

There are no discriminating duties; goods of all classes from any country are admitted on payment of the duty.

EXCHANGE AND SHIPPING FACILITIES.

The only facilities for monetary exchange are by shipment of produce and specie, as there is no bank in the colony.

Shipments to this port from the United States are made either from New York, whence a regular line of steamships sail monthly direct, or from New Orleans, whence a subsidized line of steamships carrying the mails sail every Thursday.

TRADE OUTLOOK.

The trade in American flour can not be further extended here unless the population increases, as the supply is now fully equal to the demand.

JAMES LEITCH,
Consul.

BELIZE, *February 28, 1894.*

SALVADOR.

STANDARD OF LIVING.

The standard of living in the Republic of Salvador is low among the masses. They eat "frijoles" (black beans) and "tortillas" (corn cakes), which, with coffee in the morning and occasionally a little cheese, form their main diet. The better classes add meats, according to their means, but all classes of natives prefer tortillas to bread. Flour is used chiefly in sweetbreads and cakes (*pan dulce*).

A first-class quality of flour is most used.

IMPORTS OF FLOUR AND WHEAT.

The quantity of wheat flour imported into the Republic of Salvador during the years ending June 30, 1891, 1892, and 1893, amounted to 4,903,937 kilograms, 5,556,472 kilograms, and 4,942,396 kilograms, respectively.

In the second half of the year ending June 30, 1893, 992 kilograms of wheat flour were imported from China. The Government, doubting the declaration, caused it to be investigated, with the result that it was fully confirmed.

No wheat was imported during the years named.

DUTIES.

The import duty on wheat flour is 4 cents per kilogram and on wheat 2 cents per kilogram.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange, through the banks, are good during the coffee season, which begins in January and ends in May, because Salvador prohibits the importation of silver, which makes the rate of exchange low in comparison with that of the other Central American countries. Exchange in Salvador to-day is 66 on New York, while in Guatemala it is 100, and still more in the other states. This advantage is probably only temporary and is limited to the coffee season, after which the rate will doubtless go up. A favorite means of exchange, and one calculated to save commission at both ends, is in merchandise. For example, to pay for a consignment of flour the merchant in Salvador will ship a consignment of coffee, etc., to the United States.

The facilities for shipping from the United States to Salvador are via the Pacific Mail Steamship Company and by sailing vessels. The North American Navigation Company, which carried freight from San Francisco, has practically ceased to exist, and consequently freight rates are going up.

OBSTACLES TO TRADE.

The only obstacle in the way of the extension of trade in American flour is the preference of the natives for their "tortillas." Only time can remedy that. A quintal of corn sells here for 4.50 pesos and a quintal of flour for 8 pesos ($2.09 and $3.72 American), but even when, as during last year, corn failed and sold higher than flour, the demand for the latter was not correspondingly greater.

TRADE OUTLOOK.

Just now foreigners are very active in Salvador. An English syndicate has secured a concession for a railroad, and an American company has a proposition pending for another railroad. Another American firm is trying to build a bridge across the Lempa River. Still another is negotiating for certain mining properties. All these people demand wheat bread, and will thus acquaint the natives with the use of flour. I am assured that the sale of wheat flour since last year is increasing. No other means for extending the business among this primitive people are possible.

ALEXANDER L. POLLOCK,
Consul.

SAN SALVADOR, *April 7, 1894.*

ARGENTINE REPUBLIC.

Neither wheat nor wheat flour have, for the last fifteen years, been imported into the Argentine Republic. The quantity produced in the country is not only sufficient for the home demand, but there is an annually increasing surplus, which finds a market in Brazil and in Great Britain, France, and other European countries. The exports of Argentine flour in 1891 were 7,115 tons; in 1892, 18,849 tons; and in 1893, 37,921 tons. The exports of Argentine wheat in 1891 were 395,555 tons; in 1892, 470,109 tons; and in 1893, 1,008,187 tons.

There is no import duty on wheat or flour, but there is no demand or market whatever for the foreign articles.

E. L. BAKER,
Consul.

BUENOS AYRES, *April 10, 1894.*

BOLIVIA.

The people of Bolivia are ready to eat American flour.

The flour most used is Chilean, but merchants and people alike prefer American flour.

The imports of American flour into Bolivia during the calendar years 1891, 1892, and 1893 amounted to 6,000, 7,200, and 4,650 quintals,* respectively. American wheat is not imported.

The imports of Chilean flour during the same years amounted to 38,815, 56,000, and 58,000 quintals, respectively.

Bolivian flour and wheat were received in this capital (La Paz) during the same years to the following amounts:

Year.	Flour.	Wheat.
	Quintals.	*Quintals.*
1891	11,584	4,540
1892	13,600	6,200
1893	14,200	6,325

The import duty on flour and wheat from all countries is as follows: Flour, 1.20 bolivianos† per quintal; wheat, 0.50 boliviano per quintal.

Monetary exchange is effected through drafts on London and Paris at ninety days sight.

Bolivia having no seaport, all foreign goods for this capital are received through the Peruvian port of Mollendo.

American flour could be sold here in large quantities to better advantage than Chilean flour, and at a price not less than 10 bolivianos ($4.65) per quintal.

GERARD ZALLES,
Acting Consul.

LA PAZ, *March 12, 1894.*

*1 quintal=101.61 pounds. †1 boliviano=46.5 cents.

BRAZIL.

PARA.

STANDARD OF LIVING.

The standard of living among the upper and middle classes is very good, but extremely low among the poorer people.

QUALITY OF FLOUR USED.

Nearly all of the flour used here is imported from the United States. None but the best grades are consumed in this market. Wheat flour is only used where bakeries exist. The people rarely have flour in their homes, and substitute "farinha" when bakers' bread can not be had; especially is this true in the rural districts.

IMPORTS OF WHEAT FLOUR.

The quantities of flour imported from the United States during the years 1891, 1892, and 1893 were 12,675 barrels, 45,781 barrels, and 23,331 barrels, respectively. Much of the imports of 1892 were held over, which accounts for the smaller imports of 1893.

The importation of flour from other countries is very insignificant, amounting to only 8 barrels in 1892, which, I am told, is a fair estimate for the imports in 1891 and 1893 also.

The demand is increasing steadily, and will, I feel certain, keep pace with a fast-growing population.

EXCHANGE AND SHIPPING FACILITIES.

The facilities are good for monetary exchange, but as we have no American banking houses here nearly all exchange is sold on London, better terms being given on London than can be had on New York.

The shipping facilities from the United States to this place are ample and good. We have from two to three steamers, mostly English steamers, and one American sailing ship per month.

OBSTACLES TO TRADE.

There are no obstacles in the way of the extension of our flour trade. The admission of our flour free of duty, while all other flours are forced to pay duty, works largely in our favor. That, added to our great flour resources, will enable us to easily hold the flour trade in this part of the world.

GEO. G. MATHEWS, JR.,

PARA, *April 18, 1894.* *Consul.*

PERNAMBUCO.

STANDARD OF LIVING.

Among the upper classes the standard of living is quite as high as among similar classes in cities of the same size in the United States, so far as I can learn. In the smaller towns and villages, as well as in the rural districts of the State, the upper classes also live well, including the agricultural class. A large quantity of flour is also used by the poorer classes of people, but their principal cereal, or what may be substituted for a cereal, is "farinha." It is made from a root, which, after six to eight months growth, is dug up, dried, and ground, and then used either uncooked, roasted, or boiled. It is very largely used by the poorer classes, and also may be found upon the tables of the upper classes and in hotels and restaurants. In the uncooked condition this flour, if it may be called such, is known simply as "farinha;" roasted or thoroughly heated, it is called "farofa;" and when boiled, it is known as "pirão." In addition to this, so largely used by the poorer classes, and which seems to be a necessary part of their daily food, the fruits of the country, such as bananas, "jacas," breadfruit, and various other kinds are extensively eaten.

QUALITY OF FLOUR USED.

The quality imported from the United States is chiefly the Baltimore brands, while that imported from Europe is known as the Trieste flour.

IMPORTS OF FLOUR AND WHEAT.

The imports of American flour amounted to 127,584, 110,754, 146,427, and 139,806 barrels in 1890, 1891, 1892, and 1893, respectively. During the same years the imports of flour from Trieste amounted to 85,202, 69,422, 38,950, and 64,948 barrels, respectively.

During the years above mentioned there was no wheat imported into this district, nor was there any wheat flour other than that from the United States and Trieste.

DUTIES.

Since the reciprocity treaty there is no import duty on American flour or wheat. The import duty on flour from other countries than the United States is 2.09 milreis ($1.14) per barrel weighing 87 kilograms (191.8 pounds).

EXCHANGE AND SHIPPING FACILITIES.

Exchange facilities are, at present, limited to two banks, viz, the Banco de Pernambuco, which is controlled by Brazilian directors, and the London and Brazilian Bank, which is an English bank.

There is no American line of steamers plying between the United States and Brazil. The following lines do the carrying trade, viz: Lamport & Holt, Red Cross, Booth, Prince, and Sloman's. The first four are English lines, and the last flies the German flag.

TRADE OBSTACLES AND OUTLOOK.

In reply to interrogatories 15 and 16 I inclose as answers to those questions and as part of this report the views of Mr. H. F. Hitch, of the house of H. Forster & Co., of this city. This house has been established in Pernambuco for upwards of seventy years. It is the only American importing house. As the principal importation is flour, the views of Mr. Hitch are well worth the attention of our flour manufacturers:

By the terms of the reciprocity treaty American flour is free from duty, while on flour from other countries the duty is 2.09 milreis per barrel. The consumption of American flour in this State has increased, not only with the increase of population, but with the establishment of railways to the interior. Prior to the opening of the railways no flour went to the interior, except in the form of biscuits, which were baked in the city, while now both American and Trieste flour is sold to bakers some hundreds of miles in the interior, being carried in bags on horseback from the terminus of the three railroads. This new system has naturally curtailed the consumption by our local bakers, taking from them their upcountry custom, but such curtailment has been not only made up, but a far greater quantity of flour goes direct to the country bakers.

The extreme cheapness of American flour, together with the advantage of its being free of duty, has, during the two years past, very considerably increased its consumption as compared with Hungarian flour. But, regardless of price, our bakers will have a certain quantity of Hungarian flour, notwithstanding the fact that the best American patent flour, which in Europe sells side by side with Hungarian, can be sold here at about 8 milreis ($4.37) per barrel less. The bakers of this State do not seem to be able to obtain good results from our patent flours; whether through ignorance or by reason of the water or other causes it is impossible to say, so that in spite of the efforts of flour importers, the attempt to substitute high-grade American for Hungarian has met with no success, and the business in American flour here is confined entirely to straight flour, most of which comes from Baltimore. There is certainly a quality in Hungarian flour absent from any American, viz, it will continue perfect in this climate for six to eight months, and even longer, while half that time is sufficient for American to deteriorate seriously, and our patent flour, which is supposed to resemble Hungarian, lasts a still less time, strange to say.

The Hungarian barrel is far superior to that made in the United States, being tight and solid, while the American is, in many cases, very loose and goes to pieces easily. In rolling a barrel of Hungarian flour nothing escapes, while in rolling an American barrel a cloud of flour dust is raised, and it is fortunate if hoops do not come off and the head come out. This is a matter that should have the attention of our millers, who do not seem to realize the hard usage a barrel must have in the handling necessary to its delivery in a Brazilian port.

It is fortunate that flour is not sold here, as in the United States, by weight; if it were there would be a claim on every barrel delivered here. But for the extremely low price in producing countries, which has acted to a great extent as an offset to the rapid decline in the value of the Brazilian currency, no doubt we should have a decreased consumption of flour; but as yet it can be sold here in currency for a price which has often been current when the currency was at par. The one great obstacle to the entire exclusion of Hungarian flour in favor of American is the lack of good workmen in the bakeries, and, in fact, the ignorance of their trade on the part of the bakers in general. Even now there is here and there one who uses only American flour even for family bread, but they are very rare exceptions. Five years ago the importation of American flour was only 10 per cent more than Hungarian flour; in 1893 it was 115 per cent greater. This should be very encouraging to our millers.

DAVID N. BURKE,
Consul.

PERNAMBUCO, *April 10, 1894.*

RIO DE JANEIRO.*

STANDARD OF LIVING.

The standard articles of food in this district are Indian rice and national mandioca flour. People are ready to eat preparations of American flour, which is only consumed, owing to its superior cost, in proportion of 1 pound of flour to 1½ pounds of rice and half a pound of mandioca flour.

QUALITY OF FLOUR USED.

The quality of flour most used is American hard winter wheat flour, and of that principally the grades termed "extras."

IMPORTS OF FLOUR AND WHEAT.

The imports of flour and wheat at Rio de Janeiro during the calendar years 1891, 1892, and 1893 were as follows:

Kinds.	Flour.			Wheat.		
	1891.	1892.	1893.	1891.	1892.	1893.
	Barrels.	*Barrels.*	*Barrels.*	*Bushels.*	*Bushels.*	*Bushels.*
American	290,888	441,892	412,235	204,444	135,452	10,635
Argentine	.....	.....	.....	1,338,290	1,403,640	1,780,027
Austrian	8,139	4,501	3,628	.....	.....	231
Australian	.....	.....	.....	9,990	.....	.....
River Plate ports	11,533	44,211	119,848	.....	.....	.....
All other	.....	.....	.....	.....	404	.....
Total	310,560	490,604	535,711	1,552,724	1,539,496	1,790,893

DUTIES.

American wheat and wheat flour are imported free of duty.

The import duty on wheat flour from other countries is 24 reis (at the present rate of exchange, about half a cent in United States gold) per kilogram of 2.205 pounds.

The import duty on wheat from countries other than the United States is 5 per cent ad valorem.

EXCHANGE FACILITIES.

The facilities for monetary exchange are those specially offered by three English banks and one German bank, with branches in this country, and one Brazilian bank, which buy and sell the local currency at a rate regulated according to the offer and demand of commercial or bank bills, most of which are payable in London, and which rate is generally termed "ex-

*Vice-Consul-General Lewis writes (April 23, 1894) that this report was prepared, at his request, by Emil Garai, esq., an American citizen resident in Rio de Janeiro, who makes the flour business a specialty.

change." This "exchange," regulated by these banks, is of a very fluctuating nature, as the following table of extremes of rates on London will show:

Rates of exchange on London.

Year.	Per milreis.	
	Highest.	Lowest.
	Pence.	*Pence.*
1856	28 1/4	27
1857	28	23 1/2
1858	27	24
1859	27	23 1/2
1860	27 1/2	24 1/2
1861	26 3/4	24 1/2
1862	27 1/2	24 3/4
1863	27 1/4	26 3/4
1864	27 3/4	25 1/2
1865	27 1/2	22 3/4
1866	26	22
1867	24 3/4	19 3/4
1868	20	14
1869	20	18
1870	24 3/4	19 3/4
1871	25 1/8	24 7/8
1872	26 3/4	24 1/2
1873	27 1/2	25 1/2
1874	26 3/4	24 3/4
1875	28 1/2	26 1/2
1876	27 1/8	23 1/2
1877	25 3/4	23
1878	24 3/4	21
1879	23 3/4	19 1/2
1880	24	19 7/8
1881	23 1/2	20 1/16
1882	22	20 1/2
1883	22 1/2	21
1884	22 1/2	19 3/4
1885	19 1/2	17 3/4
1886	22 3/4	17 3/4
1887	23 1/2	21 1/2
1888	27 7/16	22 1/2
1889	28 1/2	26 1/2
1890	26 1/2	20 3/4
1891	21 3/4	10 3/4
1892	16 1/2	10 1/2
1893	13 3/4	10 7/16
1894 (February 6)	9 3/4	.....

The following statistical figures demonstrating the import and export trade through the custom-house of Rio de Janeiro with some of the countries doing the most business with this port for the two years commencing January 1, 1890, and ending December 31, 1891, will not be uninteresting in connection with the question of the facilities for monetary exchange, although not exactly answering the interrogatory made. They will, however, prove statements intended to be made here, which, although not solely affecting the American wheat flour and wheat export, still include the same, while bearing upon the whole commerce of the United States with Brazil in gen-

eral, and Rio de Janeiro in particular. It is to be regretted that no newer complete information can be given of the commercial movement of the port of Rio de Janeiro, nor any official statistics upon the import and export of the other eighteen Brazilian ports, most of which are, independently of each other, in direct relations with the world's markets. The amounts given are in United States gold dollars (exclusive of gold in specie), converted at the average rates of exchange of the respective years, viz, 22⅝*d.* for 1890 and 16.33*d.* for 1891, and at $4.80 (United States gold) per £1.

Trade of Rio de Janeiro with the principal countries.

Countries.	Exports.	Imports.	Total.
United States:			
1890	$33,318,216	$6,897,420	$40,215,636
1891	30,156,868	5,517,429	35,674,297
Total	63,475,084	12,414,849	75,889,933
Great Britain:			
1890	2,550,802	20,425,246	22,976,048
1891	2,004,599	17,982,409	19,987,008
Total	4,555,401	38,407,655	42,963,056
France:			
1890	3,164,402	10,319,719	13,484,121
1891	4,489,820	9,408,616	13,898,436
Total	7,654,222	19,728,335	27,382,557
Germany:			
1890	5,873,885	8,030,153	13,904,038
1891	5,564,899	6,933,979	12,498,878
Total	11,438,784	14,964,132	26,402,916
Italy:			
1890	646,574	694,091	1,340,665
1891	587,232	618,115	1,205,347
Total	1,233,806	1,312,206	2,546,012
Portugal:			
1890	87,582	3,455,601	3,543,183
1891	32,788	2,092,686	2,125,474
Total	120,370	5,548,287	5,668,657

To show the necessity of deducting from the official totals the movement of gold in specie with the above countries, it is only necessary to state that the exports in 1890 and 1891 amounted to $13,703,392.63 and the imports to $6,090,805.29, of which Great Britain alone figures for $12,310,285.94 in the exports and for $5,635,203.96 in the imports.

By the preceding table of exports and imports it will be seen that not only are the United States doing the largest trade as to value (unfortunately the greater amounts are not imports), but on an average for each of the years 1890 and 1891 they surpass Great Britain to the amount of $16,463,438.09; France, $24,253,688.33; Germany, $24,743,508.40; Italy, $36,671,960.27; and Portugal, $35,110,638.07 (in United States gold).

While it is admitted that these figures, which refer to the port of Rio de Janeiro alone, through which about 2,250,000 inhabitants out of about 14,000,000 for the whole Republic are accommodated in imports and exports, present striking differences compared with the commercial movement with other countries, it is still more remarkable that while England has three banks in Rio de Janeiro, Germany one, Italy one, and Portugal several agencies of Portuguese banks, the United States have none. Taking into consideration that every cent going from this country to the United States or *vice versa* has to pass through the London banks (which, of course, does not occur without paying tribute), amounting to millions in the course of years, these amounts are thus subtracted from the wealth of the United States.

It may be said that a rate of exchange for the American dollar is unknown here. While England sells her manufactures and buys Brazilian produce in sterling, Germany in marks, and France in francs, the United States are forced to sell their manufactures and buy Brazilian produce in sterling, which is indicative of a want of a certain amount of energy on the part of the Americans. There can be no doubt that an American bank, with a head office in New York, is sorely needed here. It would, by careful management, not only find a productive soil to work upon, but would also perform the patriotic task of promoting American commerce, industry, and agriculture.

SHIPPING FACILITIES.

The facilities for shipping merchandise in general from the United States to this port consist of several lines of steamships and sailing vessels. There are no shipping facilities of any kind for wheat flour for the individual miller, and unless he is protected, as it were, by one of about half a dozen mercantile houses who monopolize the Brazilian flour trade and who are alone privileged by these shipping lines to ship flour to this country, he is debarred from selling his product, as the shipping lines will receive no flour for shipment from any individual miller.

OBSTACLES TO TRADE.

To answer the question as to obstacles in the way of the extension of trade in American flour let me deviate, to make the point clear, and speak of American trade generally and then return to the original question.

Brazil is conspicuous for more importers, probably, than any other nation, comparatively speaking. Nearly 90 per cent of the Brazilian dealers with the interior and shopkeepers in the first-class ports are importers, direct or indirect, through local commission houses or through agents of foreign commission houses and manufacturers, the reason for this being that the import duties are very high (being the principal source of revenue for the Government) and the wholesale merchant, counting his profits not only from the cost of the goods, but also from the amount of duties paid in importing direct, not only saves the latter profit, but also the greater part of the former. It is thus that stocks of goods here are smaller, in proportion, than they are

elsewhere, as these merchants only import just enough for their probable requirements for a certain period, first, because the majority of them have only limited capital at their disposal, which will not permit them to accumulate large stocks, and, second, because merchandise of almost any kind will deteriorate quickly on account of the hot and damp climate. It will, therefore, be easily understood that these merchants have to replenish their stocks often and with the least possible delay. The generality of merchandise, however, can not be ordered by cable, there being so many details to be noted. The order, therefore, has to be transmitted by letter, and when the merchant makes an order he wants his goods, for the reasons explained, as quickly as possible. He will make his selections from catalogues or samples in his possession or at the local sample rooms, according to qualities and prices, and finally ask when he can have the goods. When it is a question of English or continental merchandise, he will receive the answer that there will be an outgoing mail in one to five days, the letter will arrive in Europe in seventeen to twenty days, a month will be required for the execution of the order, and a month for the passage of the steamer bringing the goods. In three months, at the outside, the Brazilian merchant has replenished his stock with English or continental wares.

Quite different is the case when it is a question about American goods. In the first place, there is no line of mail steamers, properly speaking, between these two countries, and the cargo steamers carrying mails to the United States have no certain days of departure; nor do they make a determined number of trips, often departing a week or more later than the day advertised. When at last these steamers have started on their voyages they invariably call at some of the other Brazilian ports, where the delay is sometimes as long as a week at a single port, and finally arrive in the United States in from twenty-five to forty days. Counting the time from the day for which their departure was advertised, the time extends from thirty-two to forty-five days. The order is then executed in the United States, let us say, in the same time as in Europe—in a month; then the manufacturer's attention is directed towards shipping opportunities, which he will find under circumstances equal to those described, and the goods will require the better part of six weeks, and often even more, to reach here. Thus, where an order required at the outside three months to be executed from Europe, the order for American goods is executed with the greatest of difficulties in four or five months. But this is not all, for before goods are ordered connections have to be made, questions asked and answered, and many details arise which make additional correspondence necessary. While nine questions and answers can be exchanged with Europe in one year, only four questions and answers can be exchanged with the United States during the same period. The state of affairs is even worse, if anything, in the northern parts of this Republic. From what has been said it will astonish nobody that American trade, with the exception of articles for which this country is to a great extent dependent on the United States, has increased no more in proportion since

the existing reciprocity treaty was made between the two countries than the trade of other countries during the same time; the import of wheat, it may be said, has ceased altogether, for, while the import of American wheat was 455,756 bushels in 1890, that of 1893 was only 10,635 bushels, against 1,780,027 bushels from the Argentine Republic.

The only solid basis possible between the United States and Brazil is to bring the two countries closer together through rapid mail communication and ampler shipping facilities, without which all efforts on the part of Americans to gain some of the trade now done by other countries will be in vain. Great Britain has two powerful lines of steamers carrying mails in seventeen to nineteen days and two important lines of cargo steamers running to this country. France has a fine line of mail steamers, also carrying mails in seventeen to nineteen days, and two powerful lines of cargo steamers. Germany has two lines of cargo steamers forming in themselves a numerous fleet. Italy has two lines of rapid steamers, making the voyage in from fourteen to sixteen days. The United States have actually two lines of sailing vessels trading to this port, making average voyages of from fifty to sixty days.

The remarks upon the want of adequate shipping facilities for general merchandise are equally applicable to the export of American flour, and, while this is felt in the generality of cases, it is especially confirmed by a recent feature in the flour market of Rio de Janeiro, viz:

Through reasons which have no bearing on the case in question, flour was sold at the end of December of last year for about $7.50 per barrel, or at a profit of over $2.50 per barrel, which is, of course, considered an unusually good profit. As may be imagined, this was immediately cabled by the representatives of the American flour trade to the United States and by those in the River Plate flour trade to that country. The consequence was that considerable quantities of flour were shipped from both sides, with the result that the River Plate flour, coming in about ten days, has benefited to a great extent by this sudden and unexpected demand for flour, while the bulk of the American flour came some fifty or sixty days after that time, and has thus not only not had the advantage of this favorable tendency of the market, but, on the contrary, had to be sold at depressed prices, while that quantity of flour which was displaced by River Plate flour is to that extent a decrease in the export of American flour to this country. The response to this will probably be that the River Plate will be always able to put its flour quicker into this market. This, of course, can not be denied; but there is still a great difference between a voyage of fifty to sixty days by a sailing vessel and a voyage of about three weeks per steamer. Had this flour arrived in that space of time a great deal of it would still have been consumed and would have obtained far better prices in competition with the former. This state of affairs is even worse in the northern ports, especially in Ceara, Maranhão, and, to a great extent, at the Amazonas ports, where there are no special flour merchants, but merchants dealing in a variety of merchandise, and who

do not care to cable for the small lots of flour they require from time to time. To these the "monthly" mail communication is of great disadvantage in their transactions with the United States, while, on the other hand, the important cities of Bahia and Pernambuco are not much better off.

TRADE OUTLOOK.

There are not only no prospects for doing a more extensive business in American wheat flour in the near future, but, on the contrary, if proper steps are not taken in time, there are strong indications for its decrease in the whole of that part of Brazil which is situated southward of Pernambuco, and which comprises about six-sevenths of the population of this country, from reasons which have their origin more or less in the geographical relation of the United States to Brazil, as compared with that of its rivals as flour furnishers—the Argentine Republic and Uruguay.

Our reciprocity treaty with Brazil and the duty which the River Plate flour pays against the entry free of duty of the American flour should be, it may be said, sufficient to make the American flour compete favorably with the former. To this the answer is that the United States can not favorably compete under existing circumstances with the River Plate republics, despite the reciprocity treaty. On the contrary, the United States are at a considerable disadvantage, through (1) the considerably higher freight American flour has to pay (excepting, perhaps, as regards the states of Manaos, Para, Piauhy, Maranhão, and Ceara, comprising at the most one-seventh of the entire population), and (2) the Argentine miller is almost in direct connection with the Brazilian flour consumer, and thus saves the broker's commission which the American miller pays in selling to the American export commission house, 3 per cent commission which the American export commission house charges for exporting the flour, and interest at 6 per cent per annum, or about 1 per cent for the time the American flour and the remittance for its value are on voyage, both these voyages taking about two months more in the case of the United States as compared with the Argentine Republic and Uruguay.

Besides, when the reciprocity treaty was made, entering into force April 1, 1891, two important points escaped the attention of the American statesman—(1) the fluctuating value of the milreis, the average value of which for the year 1888 was 25¼*d.*; for 1889, 26$\frac{1}{16}$*d.*; for 1890, 22⅝*d.*; for 1891, 16.33*d.*; for 1892, 11.94*d.*; for 1893, 11.56*d.*; and to-day (February 6, 1894) only 9¾*d.*;* and (2) the rapid changes on the part of the Brazilian Government in regard to the currency in which the duties are to be paid, that is, whether in Brazilian paper currency or in gold. Flour paid duties (16 reis per kilogram) up to June 30, 1890, in paper currency; from July 1, 1890, to November 14, 1890 (16 reis per kilogram), 80 per cent was payable in paper currency and 20 per cent in gold; from November 15, 1890, to December 31, 1891 (16 reis per kilogram), entirely payable in gold, or the

*In the history of Brazil exchange was never so low as it is at present.

milreis calculated at 27*d.* sterling; and from January 1, 1892, up to this date (50 per cent, or altogether 24 reis), entirely payable in paper currency.

Now, let us see the effects the fluctuations of exchange and the various dispositions as to the currency in which the duties are to be collected have had on the River Plate flour as against American since the reciprocity treaty was enforced (taking an English penny roundly as 2 cents in United States gold): A barrel of flour coming from the River Plate of the weight of 196 pounds, or 88.888 kilograms, paid from April 1, 1891, to December 31, 1891, duties at the rate of 16 reis per kilogram in gold, or, at the exchange of 27*d.*, 76.3 cents in United States gold; from January 1, 1892, to December 31, 1892, 16 reis plus 50 per cent, or 24 reis in paper currency, or, at the average rate of exchange of the year 1892 (11.94*d.*), 50.9 cents in United States gold; from January 1, 1893, to December 31, 1893, 24 reis per kilogram (as in 1892) in paper currency, or, at the average rate of exchange of the year 1893 (11.56*d.*), 49.1 cents in United States gold; to-day (February 6, 1894) at 24 reis per kilogram, at to-day's exchange (9¾*d.*), 40.6 cents in United States gold.

Let me here explain why there is such an important difference in the freight rate for flour from the United States as against that from the River Plate over and above the difference in distance. American flour has to be shipped in barrels on account of the long voyage it has to make under the equator, while River Plate flour comes in bags. In this respect it is stated, on good authority, that flour in barrels occupies 33 per cent more ship room than flour in bags. This premised, we will accept the value of flour to be the same in New York and in Buenos Ayres, or $4.50 per barrel in 1891, $4 in 1892, and $3.50 in 1893 and at the commencement of 1894, and take into account a fair average rate of freight from New York to Rio de Janeiro at $1 per barrel, as against a good rate of 40 cents per two bags weighing 98 pounds each from the River Plate. Further, the insurance from the United States is one per cent, as against one-half of one per cent from the River Plate.

Let us now compare the cost of the flour coming to Rio de Janeiro from the one and the other of these countries on the basis of the various statements made.

By the comparative statement following it is demonstrated that in proportion with the fluctuations in exchange and the various dispositions of the Brazilian Government regarding the currency, in which the duties are to be paid, the American flour becomes more or less protected, and while it was on something like an even footing with the River Plate flour in 1891, it has been at a disadvantage ever since that time.

It may be observed here that the average of the River Plate flour is of a considerably lower quality than the American flour, and is, for that reason, always sold at from 30 to 50 cents below the price of the latter. The American flour being of a superior quality is also a reason why it is preferred.

Cost of flour coming to Rio de Janeiro.

Costs.	American.	River Plate.
1891.		
Cost per barrel, free on board	$4.50	$4.50
Freight	1.00	.40
Interest for 2 months	.05⅝	.....
Export commission (3 per cent)	.16⅞	.....
Insurance	.05⅝	.02⅛
Duty	.....	.77
Total	5.77⅜	5.69⅛
1892.		
Cost per barrel, free on board	4.00	4.00
Freight	1.00	.40
Interest for 2 months	.05	.....
Export commission (3 per cent)	.15	.....
Insurance	.05	.02
Duty	.....	.51
Total	5.25	4.93
1893.		
Cost per barrel, free on board	3.50	3.50
Freight	1.00	.40
Interest	.04⅜	.....
Export commission (3 per cent)	.13⅛	.....
Insurance	.04⅜	.02
Duty	.....	.49
Total	4.72⅛	4.41
1894 (February 6).		
Cost per barrel, free on board	3.50	3.50
Freight	1.00	.40
Interest	.04⅜	.....
Export commission (3 per cent)	.13⅛	.....
Insurance	.04⅜	.02
Duty	.....	.40⅛
Total	4.72⅛	4.32⅛

Let us now examine the advantages that the reciprocity treaty has brought to American wheat, while we keep in mind that all other than American wheat pays 5 per cent ad valorem duty. Accepting a value of 70 cents (United States gold) per bushel in New York and in Buenos Ayres, and an advantageous freight rate for wheat from New York to Rio de Janeiro at 30*s.* per ton, while 15*s.* may be considered a good rate from Buenos Ayres to Rio de Janeiro, we will get the following prices of the wheat landed at Rio de Janeiro, with the advantage for the Argentine Republic of a voyage of from five to ten days against twenty-five to sixty days from the United States:

	Cents.
Value in United States gold of wheat in New York.....per bushel...	70
Freight to Rio de Janeiro at 30*s.* per ton, or, say, 33 bushels to the ton at 10.9*d*.....	22
Total.....	92
Value of Argentine wheat in Buenos Ayres.....per bushel....	70
5 per cent ad valorem duty.....	3½
Freight to Rio de Janeiro at 15*s.* per ton.....	11
Total.....	84½

It will thus be understood that, despite the 5 per cent ad valorem duty the River Plate wheat pays, it has a considerable advantage over the American wheat through the shorter distance it has to travel, and it will astonish nobody that the American wheat import, which was 455,756 bushels in 1890, 204,452 bushels in 1891, and 135,452 bushels in 1892, became reduced in 1893 to 10,635 bushels, and will cease entirely unless River Plate crops are exceptionally bad and those of the United States good.

The readers of this report are acquainted with the area, population, etc., of the two River Plate republics, and if these are here recalled it is only to give more force to the argument in question. In speaking of these two republics it may be permitted to speak of them as if they formed one, because (1) the interests of the Argentine Republic and those of Uruguay are the same toward Brazil, speaking from a commercial point of view, as opposed to those of the United States, and (2) their entries in the Rio de Janeiro custom-house being often comprised under the name of River Plate make it difficult to distinguish exactly the commercial intercourse between this port and the one or the other country. The statistical figures of Rio de Janeiro will, therefore, be quoted under the heading of the Argentine Republic, Uruguay, and River Plate.

The Argentine Republic has an area of 838,600 square miles; Patagonia (claimed by the Argentine Republic), 376,600 square miles; Uruguay, 70,000 square miles; total area, 1,285,200 square miles. The population of the two countries is: Argentine Republic, about 4,500,000; Uruguay, 700,000; total, 5,200,000; or about 4 inhabitants to the square mile, as against 23 inhabitants to the square mile in the United States.

It will require no particular persuasive power to convince anyone that there is plenty of room for more population in these countries, which they are likely to get, considering that their population has more than doubled since 1881 and that Europe is continually looking for new territory wherein to dispose of its surplus inhabitants. It is also well known that the greatest part of their territory is fertile agricultural land, to a great extent still in its virgin state. They have great water ways, an immense coast line, and the mileage of their railways is on the increase. Their milling plants, it is true, are still of a low capacity, and leave a great deal to be desired to become as perfect as the average milling plants in the United States, but they have the fertile agricultural soil and thus all the advantages to invite immigration to cultivate the land and capital to develop their natural resources.

The Northwestern Miller, of Minneapolis, Minn., has some interesting matter in connection with this question by Mr. Dennison B. Smith, of Toledo, Ohio, and I quote therefrom:

I venture to reproduce some reports from my latest English papers that have a future, if not a present, significance. The latest reports from Buenos Ayres give glowing accounts of the wheat crop of the Argentine Republic now being harvested. The yield is estimated at 80,000,000 bushels and the export surplus at 53,000,000 bushels. Of the last crop, up to October 31, the exports were 33,000,000 bushels. Of course, I know that newspapers are everywhere given to "painting the lily" in their estimates of production, and it is said that

those of the Argentine Republic are particularly addicted to this custom, but this statement of increased exportation is corroborated.

Granting, as Mr. Smith says, that the newspapers, in estimating the export surplus of the Argentine Republic, had been "painting the lily," we will discount 50 per cent as an overestimate, and will still get for this year an increase of 10,000,000 bushels against last year's crop, or an increase in the export surplus of 30 per cent. This, under ordinary circumstances, may be attributed to a superior crop against an inferior one of last year, but when an increase of that importance takes place in a country during a year in which civil war and anarchy reigned supreme, the question naturally presents itself to our mind, how much will the crop of the Argentine Republic increase, seeing that they have hundreds of thousands of square miles of fine agricultural lands yet uncultivated, if that country enjoys twenty years of internal and external peace?

It will be well for the United States to treat the River Plate republics as formidable rivals in the export of wheat and wheat flour to Brazil at present and in the near future, and as dangerous competitors with the principal American export product in the remote future.

Let us compare the relative commercial importance of the United States and the River Plate republics toward Brazil and see whether that does not concern the case in question.

The total exports and imports, on a gold basis, of Rio de Janeiro during the years 1890 and 1891 (gold in specie omitted) were as follows:

Year.	Exports.	Imports.
1890	$51,060,185	$66,203,384
1891	48,281,203	55,633,945
Total	99,341,388	121,837,329

The share of the United States and the River Plate republics in this trade was as follows:

Countries.	Exports.	Imports.
United States:		
1890	$33,318,216	$6,897,420
1891	30,156,868	5,517,429
Total	63,475,084	12,414,849
Argentine Republic (1890)	1,113,555	5,919,253
Uruguay (1890)	309,315	3,970,437
Total	1,422,870	9,889,690
Argentine Republic (1891)	481,685	4,050,930
Uruguay (1891)	239,206	1,814,668
River Plate (1891)	69,463	.....
Total	790,354	5,865,598
Total River Plate, 1890 and 1891	2,213,224	15,755,288

Examining the above figures, we arrive at the following percentages from Rio de Janeiro's total export and import:

Countries.	Exports.	Imports.
	Per cent.	*Per cent.*
United States	63.9	10.2
Argentine Republic and Uruguay	2.2	22.9

The percentages of several of the other principal countries trading with Rio de Janeiro are:

Countries.	Exports.	Imports.
	Per cent.	*Per cent.*
Germany	11.5	22.3
France	7.7	16.2
Great Britain	4.6	31.5
Italy	2.24	1.08
Portugal	0.12	4.6

We will now inquire into the advantages which the reciprocity treaty has given to the United States and the advantages which Rio de Janeiro has derived therefrom during the first nine months of the treaty, viz, from April 1 to December 31, 1891: Rio de Janeiro imported from the United States goods to the value of $5,517,429.38, on which there should have been paid import duties (which were then payable in gold at the rate of .27*d.* per milreis) of $2,386,799.30. Of this duty amount, there was paid on merchandise not benefited by the reciprocity treaty $1,683,932.02. The benefits accruing from the treaty, with 25 per cent abatement, amounted to $171,013.08, and on merchandise free of duty the saving was $147,453.02. This shows the total benefits to American trade through the reciprocity treaty during the nine months from April 1 to December 31, 1891, to be $384,401.18.

Not taking into consideration any other produce exported from this port to the United States but coffee,* we find that 207,627,684 pounds of coffee were exported to the United States during the nine months from April 1 to December 31, 1891, which would have paid import duty in the United States, had it come from a nation not favored by the reciprocity treaty, at 2 cents per pound, of $4,152, 553.68, against which American trade benefited at Rio de Janeiro through the reciprocity treaty $384,401.18, leaving a balance against the United States of $3,768,152.50, or, in other words, Brazil benefited nine and four-fifths times as much as the United States during the first nine months the reciprocity treaty was in existence.

The United States are by far the best consumers which Rio de Janeiro has, and that which can be said of this port can be said of Santos and the

* The official value of products other than coffee exported to the United States in 1891 amounted to only $32,945, not including that which came during the second half of the year from the State of Rio de Janeiro, for which there are no official values, but which are of no special significance.

Amazonas ports, while the advantage in all other ports is also on the side of Brazil. The River Plate republics are not only no greater consumers of Brazilian produce, but considerably more merchandise is imported into Brazil from the River Plate than is exported thereto.

To sum up, the advantages which Brazil derives from the reciprocity treaty are so great that, after giving to the United States all the concessions which we could desire, Brazil would be still the beneficiary.

RIO DE JANEIRO, *February 6, 1894.*

SANTOS.

STANDARD OF LIVING.

The standard of living here is high. Everything in the line of comestibles is consumed here.

The people are not only ready to eat, but are eating American wheat flour, which stands ahead of all other in their estimation.

QUALITY OF FLOUR USED.

The quality of American flour most used is made from spring wheat, yet all grades are sold here.

IMPORTS OF FLOUR AND WHEAT.

No official statistics relative to the importation of American flour at this port can be obtained for some time, as the following letter from the inspector of customs will show:

OFFICE OF THE INSPECTOR OF THE CUSTOM-HOUSE OF SANTOS,
Santos, February 21, 1894.

HENRY C. SMITH, Esq.,
U. S. Consul.

SIR: I am sorry that I can not comply immediately with the desire of your favorable letter of to-day; but as soon as we can get ready the statistics of American importations for the years 1892 and 1893, and as soon as we can complete our present work, which will take about three months, I will comply with your request.

Very respectfully, etc.,

LEOPOLDO L. DE ALENCAR.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are good; but all drafts for payment must be drawn in sterling on London.

The facilities for shipping goods from the United States are good, as there are many steamers and sailing vessels plying regularly between this port and the ports of the United States.

OBSTACLES TO TRADE.

So far as I have observed, there are no obstacles in the way of the extension of trade in American flour.

TRADE OUTLOOK.

In my opinion, the prospects for doing a more extensive business in American flour in this consular district are very flattering.

HENRY C. SMITH,
Consul.

SANTOS, *March 8, 1894.*

BAHIA.

STANDARD OF LIVING.

The upper classes in this consular district live well—equally as well as the same classes in the United States. The standard of living with the middle class is not so good as that which prevails among a similar class in the United States, and that of the laboring class is far below that of the same class in the United States. Wages are very much less here, consequently the working people can not afford to live as well as the American wage-earners. Their principal food is "farinha" (grits or coarse meal prepared from the root of a native bush called "mandioca," which is extensively cultivated), black beans, dried beef, vegetables, and fruit. Wheat-flour bread is a luxury in which they seldom indulge.

There is no prejudice against American wheat flour, and, as shown by the increased importation, the amount consumed annually is increasing, and flour bread is becoming more generally used.

QUALITY OF FLOUR USED.

All grades are used here; the best is from Buda-Pesth or Trieste, the medium from the United States, and the poorest from the Argentine Republic and Rio de Janeiro. The people here are willing to pay a good price for high-grade flour. Flour is quoted in Bahia to-day, less 10 per cent for round lots, as follows: River Plate and Rio de Janeiro, per two sacks of 100 pounds each, 22 to 27 milreis;* American, per barrel, 27 to 29 milreis; Buda-Pesth or Trieste, per barrel, 39 to 40 milreis.

* The consul says that one milreis is equal to about 50 cents.

IMPORTS OF FLOUR AND WHEAT.

The importation of wheat flour into this port during each of the last three years was as follows:

From—	1891.	1892.	1893.	Total.
	Barrels.	*Barrels.*	*Barrels.*	*Barrels.*
United States	31,355	40,624	45,132	117,111
Austria	28,971	32,927	37,663	99,561
River Plate and Rio de Janeiro	8,140	12,624	21,638	42,402
Total	68,466	86,175	104,433	259,074

Nearly all the flour imported from the River Plate came in sacks of about 100 pounds each, only 1,500 barrels proper being imported during the three years. The River Plate flour was either ground in Rio de Janeiro or shipped thereto from the River Plate. Perhaps small amounts of flour of other countries were included in the imports under this head.

Wheat is not imported into Bahia.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are very good. There are six banks in this city, five of which are Brazilian. Three of these and one English bank have foreign correspondents. The English concern is the London and Brazilian bank, which has branches on this coast and agents in New York.

The Lamport & Holt Steamship Company (British) has a line of steamers direct from New York to this port, one leaving New York on or about the 1st and 15th of each month. C. Morton Stewart & Co. (American), of Baltimore, have a line of splendid sailing vessels, averaging about 700 tons each, running direct from Baltimore to this port, one vessel leaving Baltimore every fifteen or twenty days. There are other vessels, steam and sail, running irregularly between this and American ports.

TRADE OUTLOOK.

I am satisfied, from the information I have, that the best grades of American flour are not brought here, and that the brands that have been imported have not been upheld. The bakers have been deceived, and have not the confidence in it they have in the well-known brands of Austrian flour.

If the American millers would establish agents here for high-grade flour, protect and uphold the brands, they would soon be able to supply the bakers, even to the exclusion of the Austrian flour.

R. P. McDANIEL,
Consul.

BAHIA, *May 5, 1894.*

CHILE.

TALCAHUANO.

Flour made from native wheat is used here, and neither flour nor wheat is imported.

Exchange is effected by bank drafts on London, and ships from New York arrive at this port regularly.

Chile being a wheat-growing country, the prospects for the introduction of foreign flour are not promising.

JOHN F. VAN INGEN,
Consul.

TALCAHUANO, *January 29, 1894.*

VALPARAISO.

STANDARD OF LIVING.

The standard of living in this district is very good, wheat flour being generally used throughout Chile, as there is no other cereal from which bread is made.

QUALITY OF FLOUR USED.

The quality of flour used is slightly inferior to American wheat flour, there being no demand for higher grades. About one-half the flour is made by the roller process, the other half being produced by the old methods.

EXPORTS OF WHEAT.

Chile is an agricultural country and produces a surplus of wheat, which is exported to Europe. The quantity exported in the year 1890, according to official figures, was 28,521 tons; in 1891, 175,244 tons; in 1892, 143,506 tons. The decreased export in 1892, as compared with the preceding year, was not due to a lesser area being cultivated nor a smaller yield, but to the unfavorable weather at harvest time, which rendered much of the grain unfit for shipment.

IMPORTS OF FLOUR.

No American flour was imported into this district during the years 1891, 1892, and 1893.

Under existing conditions there is no prospect of opening a flour trade in this country.

JAMES M. DOBBS,
Consul.

VALPARAISO, *March 28, 1894.*

COLOMBIA.

BARRANQUILLA.*

STANDARD OF LIVING.

Out of a population of 35,000 in this city probably not more than 3,000 eat wheat bread. The remainder use bread made of both corn and yuca. The former is called "bollo de maize," the latter "bollo de yuca." They are made by reducing the corn or yuca to a "maza" or pasty dough, wrapping this dough in corn husks, strongly tied with a string made from the bark of a tree, and boiling it thoroughly. Both are very nutritious. A single "bollo" is sold for a "cuartillo" (2½ cents). The masses are not ready to eat American flour. They are quite satisfied with their native bread, and I presume prefer it to wheaten bread, and they could not afford to make the change if they so desired. A "bollo" weighs a full half pound, and, of either corn or yuca, has, to the consumer, a satisfying power of at least 10 cents' worth of bread.

QUALITY OF FLOUR USED.

The "La Union" brand is most in use. This flour is said to be milled in the west and repacked and branded in New York. Marks "S," "T," and "M," are also imported. "S" and "T" are from New York mills, and "M" is from Ohio. None of this flour would rate A1 in our best home markets.

IMPORTS OF FLOUR.

From the examination of the steamship manifests I am able to give the quantity of flour imported, in sacks of 125 pounds each, as follows: In 1891, 15,149; 1892, 17,287; 1893, 25,815 sacks.

No American wheat is imported, and no flour or wheat is imported from other countries.

EXCHANGE FACILITIES.

Exchange facilities at present are not good. The whole financial system is in a deplorable condition. Exchange has fluctuated as much as 10 per cent in a single day. At present writing sight drafts are at 160 per cent premium—that is to say, an American gold dollar equals $2.60 of the paper currency here.

* Vice-Consul Pellet is indebted to the courtesy of the steamship lines plying between Barranquilla and New York for the statistics in his report.

Shipping facilities are good. The Atlas line has two steamers per month plying between New York and this port, the Prince line three, and the Spanish line one, with an occasional "tramp." Flour comes in sacks of 125 pounds each. Sometimes five 5-pound sacks are inclosed in a single sack, which facilitates trade among small dealers.

TRADE OUTLOOK.

There was a notable increase in the importation of flour during the years 1891, 1892, and 1893. I look upon this increase as due rather to the increase of population than a conversion of the poorer classes to wheaten bread.

I may add, in conclusion, that of the above specified importation of flour only a small part was consumed on the coast; the rest went to the interior. The increase in the consumption of wheaten bread has, however, been notable. When I came to this city twenty-eight years ago, there was not an established bakery in operation, and all the wheat bread for sale was made in three or four private houses. Now we have at least six bakeries.

E. P. PELLET,
Vice-Consul.

BARRANQUILLA, *January 16, 1894.*

CARTAGENA.

STANDARD OF LIVING.

It would not be fair to compare the standard of living in this district with that which prevails in the United States. The majority of the people here are not consumers of wheat bread, their standard food being "cassava" and "bollo." The "bollo" is a mixture of ground corn and water made into a pasty substance, wrapped in corn husks, and boiled. The "cassava" is the root of the yuca, dried, pounded in a large mortar, made into thin cakes, and baked. These, with rice, plantains, yams, and salt fish, constitute the principal food of the poor classes. Wheat bread is a luxury little known to them—not that they would not prefer it, but it is too expensive. The consumption of flour has, however, increased greatly during the past two years.

QUALITY OF FLOUR USED.

A superior quality of flour is used in this market. Low grades do not sell. Very little Western flour is seen here, nearly all coming from Maryland and Virginia. "La Union," "Bella Vista," "La Perla," and "La Escojida" brands are given the preference.

IMPORTS OF FLOUR AND WHEAT.

Statistics from the records of the custom-house show the exact quantity of flour imported into this consular district from the United States to have

been 10,452, 15,159, and 10,858 barrels during the years 1891, 1892, and 1893, respectively.

No wheat is imported into this district, and no flour from countries other than the United States.

EXCHANGE AND SHIPPING FACILITIES.

Exchange by drafts is readily obtained on New York. The true value of the currency (paper dollar) of this Republic, estimated in United States gold, is about 40 cents.

A direct line of steamships—the Atlas line—runs regularly every fortnight from New York to this port.

OBSTACLES TO TRADE.

The only obstacle to a more extensive trade in this article between the United States and Colombia is the present high duty (6¼ cents per kilogram). The people, I am confident, would prefer wheat bread if it could be brought within their means, but with flour at $28 to $30 per barrel and wages at $1 per day it becomes a luxury which only the wealthy, who live mainly in cities, can indulge in.

CLAYTON I. CROFT,
Consul.

CARTAGENA, *February 14, 1894.*

COLON.

The only flour imported and used in this consular district is American wheat flour of first and lower grades. The consumption is, however, not as general as could be desired by reason of the preference given by the natives (more especially those of the laboring class) to the yuca and other breadstuffs of the country.

The following may be taken as a fair average of the quantity of American wheat flour imported here during the periods named: Year ending June 30, 1891, 6,000 barrels; 1892, 4,800 barrels; 1893, 3,600 barrels.

No wheat is imported here.

The exchange in this market undergoes rapid fluctuations, United States gold being at present at 100 per cent premium in Colombian silver.

There is steam communication between this port and New York three times a month regularly, besides communication by occasional sailing vessels.

J. L. PEARCY,
Consul.

COLON, *January 19, 1894.*

MEDELLIN.

STANDARD OF LIVING.

This department, formerly the State of Antioquia, of which Medellin is the capital, contains a population of 463,667 inhabitants, according to the census of 1884, and is the richest and most prosperous portion of the Republic of Colombia.

The general standard of living is fairly good in the principal towns, but the use of wheat bread in the rural districts and among the poorer classes is very limited, a kind of bread made of Indian corn being generally preferred.

IMPORTS OF FLOUR AND WHEAT.

American flour is the only flour imported into this district. I have been unable to obtain trustworthy data as to the quantities imported in 1891 and 1892, but I estimate the quantity for the year ending June 30, 1893, at 24,000 sacks of 125 pounds each. This estimate is based upon information obtained from the principal importers.

No wheat is imported into Antioquia. Wheat is cultivated in Antioquia to a very limited extent in the vicinity of the town of Sonson, situated on a table-land about 100 miles to the southeast of Medellin, and about 3,000 feet above the sea level. The supply from this source, however, is probably under 1,000 sacks a year, and is very inferior in quality to American flour.

EXCHANGE AND SHIPPING FACILITIES.

Antioquia exports about $3,000,000 worth of gold a year, besides other products of minor importance, and drafts drawn on the gold remittances may at any time be obtained from the banks in this city, of which there are five.

Goods reach Medellin from abroad by way of the ports of Barranquilla or Cartagena and the Magdalena River.

TRADE OUTLOOK.

There are no obstacles in the way of the extension of trade in American flour. The trade is slowly increasing, and is susceptible of still further development.

THOMAS HERRAN,
Consul.

MEDELLIN, *February 22, 1894.*

PANAMA.

STANDARD OF LIVING.

The standard of living in this district (Isthmus of Panama) is fair, so far as the upper and middle classes are concerned, but leaves very much to be desired as regards the poorer classes.

The people of this district are not only ready to eat bread made of American wheat flour, but they have been eating it for nearly half a century, whenever they had the means for securing it. There are very good bakers here, and, everything being equal, they can, I dare say, furnish as good bread as can be made anywhere on the face of the globe. The French style of baking is in vogue here.

QUALITY OF FLOUR USED.

The quality of flour used is called "Superfine," and the name is about all there is superfine about it; yet it makes good bread when mixed with some New York flour. I use the expression "New York flour" as it is shipped from New York to Colon. Nine-tenths of the flour used here in Panama comes from California. It is shipped in sacks of 225 pounds. The flour shipped from New York is in barrels.

IMPORTS OF FLOUR FROM THE UNITED STATES.

There are no official statistics to establish the quantity imported, but from the Pacific Mail Steamship Company and the Panama Railroad I have secured reliable figures which indicate that 24,200 sacks of flour were imported during the fiscal year ending June 30, 1891, 25,388 sacks in 1892, and 26,250 sacks in 1893.

As will be seen, the monthly average is a little above 2,100 sacks.

As stated above, about one-tenth of this yearly quantity, or 2,600 sacks, comes from Colon by way of the Panama Railroad. I am told that this New York flour is mixed with the California flour to give the latter more consistency. The bread at Colon is better than that at Panama.

Flour sells here at $5 (United States gold) per 100 pounds.

There is no American wheat imported for use as a breadstuff, and no flour or wheat is imported from other countries.

DUTIES.

There is no duty on flour or wheat in the department of Panama. The duty on flour in other parts of Colombia is 5 cents (Colombian) per kilogram. The duties are the same for all nations.

MONETARY EXCHANGE.

The facilities for monetary exchange are plentiful and safe between the Isthmus and all parts of the world. Cable transfers are made almost daily.

At the present time, however, people are in dread of monetary exchange, owing to the great discount on Colombian currency. At this writing American gold and drafts are at a premium of 110 per cent. Under the circumstances people do not care about indulging in extensive monetary exchange, and all business is consequently reduced to a minimum. American gold, as well as American exchange, is preferred here by all classes.

The cause of the great discount is the same old story. Gold coins (*condors*) are seldom seen, and a silver currency (50-cent pieces of 0.835 fine) is the principal medium of exchange in the department of Panama. There is also the peso (100 cents) of 0.900 fine; but these are getting scarcer all the time. They are shipped abroad and never return.

SHIPPING FACILITIES.

The facilities for shipping from and to the United States are ample. Two lines of steamers, averaging together six trips per month each way, ply between San Francisco and this place. The lines are the Pacific Mail Steamship Company and the North American Navigation Company. The latter is a new line started by the merchants of San Francisco in opposition to the Pacific Mail, which for nearly forty years has had dictatorial sway over the rates of freight between San Francisco and all ports on the Pacific coast as far south as this.

OBSTACLES TO TRADE.

If there are any obstacles in the way of the extension of trade in American flour, they are the same as those found in the way of the extension of trade in all other American products; and those obstacles, so far as I can see, are all of our own making and seeking.

There is no natural reason at all why the American flour trade should not increase, since the field is as yet clear of any and all opposition. And in this particular the flour trade has advantages that other trades have not, inasmuch as Europe has no flour trade here, while its commercial emissaries are all over this land in quest of "fresh pastures" for their respective trades. These gentlemen all speak the Spanish language fluently, but among the very few commercial men sent by United States houses, quite a number do not speak the language at all, and thus are handicapped from the start and outwitted all the way through.

SUGGESTIONS.

Perhaps the best means to secure a more extensive business in American wheat flour on the Isthmus of Panama would be the establishment of a flouring mill in this city by citizens of the United States. Certain concessions could be obtained from the government of this department for this purpose. There is no instance on record, so far as I know, of the Colombian Government's ever having repudiated a concession, even though a change of government may have taken place by revolution. Moreover, it would prove fatal to the hopes that Chile is entertaining of supplying at some future day

all the Pacific coast from Valparaiso to this place with the flour needed, and would enable us to extend our market from this point south with greater facility. Chile is perfectly justified in entertaining the hope just referred to, having already a line of steamers of her own from Valparaiso to this port, superior in appointments to the American lines from California here. Moreover, the distance from Valparaiso to Panama is shorter than that from San Francisco to this place.

To-day, as above stated, all the flour consumed here comes from California and New York, and is disposed of by wholesalers to retailers at figures which do not allow the poorer classes to eat much wheat bread. Whether the quality of the flour be good, bad, or indifferent, the prices do not vary to any appreciable extent.

Two cable lines connect the isthmus with the United States and the world—one by way of Galveston, Tex., and the other by way of Kingston, Jamaica. All the news published by these lines is European. It is seldom that a dispatch is received from the United States, and, considering that the cable by the way of Galveston has its headquarters in New York, it is strange, indeed, that news from the United States is so very scarce. Moreover, all the employés here are English subjects, and yet, if I am rightly informed, the stock of the company is largely in the hands of American capitalists.

By furnishing the people here telegraphic market prices from the United States, as well as English prices, it is probable that the facilities for the extension of the market for wheat flour, as well as all other American products, would be greatly promoted.

VICTOR VIFQUAIN,
Consul-General.

PANAMA, *January 19, 1894.*

DUTCH GUIANA.

STANDARD OF LIVING.

The population of Surinam is composed of three distinct divisions, viz, (1) Europeans, exclusively Dutch; (2) British East Indians (composed of immigrant laborers), who eat rice and Indian oils; and (3) native negroes, whose food is plantains and fish.

The kinds of flour mostly used are bakers' extras, such as "St. Lawrence," "Knickerbocker," "Bismarck," and "Retriever" brands.

IMPORTS OF AMERICAN FLOUR.

During the three calendar years ending December 31, 1893, the imports of American flour amounted to 23,817, 24,695, and 25,049 barrels, respectively. American is the only flour imported. Wheat is not imported from any country.

SHIPPING FACILITIES.

Steamers and sailing vessels afford shipping facilities between Dutch Guiana and the United States. Flour is brought here principally by sailing vessels.

TRADE OUTLOOK.

The prospects are the same as they have been for the last ten years. The United States has the entire trade, and alterations in the system are impossible.

H. LOVEJOY,
Vice-Consul.

PARAMARIBO, *February 13, 1894.*

ECUADOR.

GUAYAQUIL.

STANDARD OF LIVING.

The standard of living in the large cities of Ecuador, to which there is easy communication from this port, is about equal to that of any cities in the world. There is not a family in such cities, no matter what its class may be, that does not, to some extent, use bread every day. The very poorest class may not use bread at every meal, but will use it at least at one, and for the other meals the baked plantain is substituted, of which, of course, there is any quantity obtainable, and the cost of which is a trifle. In the country, on the farms, and in those villages with which communication is difficult, the plantain is used to a still larger extent. There is a bread baked of flour made from "yuca," which, when fresh, tastes very much like the bread from wheat flour. Here, as in all the large cities, no baking is done at home, and nothing like homemade bread is known, everything being bought from the regular bakers.

The bakers generally use the very best quality of flour, and the two best-selling brands are "La Corona" and "Pioneer," both from San Francisco.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange with other countries are good. As the exports and imports of Ecuador are about equal, there is always a supply of foreign drafts on all the principal markets of the world. The premium on exchange depends upon the price of bar silver, that metal being the money standard of the country.

Nearly all the flour—in fact, it may be said all—imported from the United States is shipped from San Francisco by sailing vessels and steamers direct to this port. The time occupied by a sailing vessel in coming here from that port is from forty to fifty days, but they have arrived here in as short a time as twenty-eight days. By steamer the cargo would reach here in about twenty-five to thirty days, all depending on the connection made at Panama, where the cargo must be transferred from the American steamers to those running from Panama to Valparaiso and calling here en route.

The freight on flour by sailer from San Francisco is from $6 to $10 per ton; by steamer it is $7.50 per ton if over 100 tons, or $10 per ton on shipments under 100 tons; from New York per steamer, via Isthmus of Panama, the freight is one cent per pound.

IMPORTS OF WHEAT.

As will be noted from the table of importations given herewith, very little wheat is imported by Ecuador.

Imports of wheat flour and other breadstuffs into Ecuador.

From—	Wheat.	Wheat flour.	Corn flour.	Biscuits.	Total.
1890.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
Chile	107,382	1,013,183	.....	788	1,121,353
Colombia	.....	32,504	.....	.....	32,504
England	.....	354	23,835	9,237	33,426
France	.....	.....	147	9,528	9,675
Germany	.....	3,089	.....	23,813	26,902
Italy	.....	100	.....	.....	100
Peru	1,509	27,256	.....	1,227	29,992
United States	.....	6,282,154	35,412	11,892	6,329,458
Total	108,891	7,358,640	59,394	56,485	7,583,410
1891.					
Chile	14,957	997,716	.....	.....	1,012,643
Colombia	.....	4,048	.....	.....	4,048
England	.....	336	7,823	35,684	43,843
France	.....	180	409	1,410	1,999
Germany	.....	.....	103	34,742	34,845
Italy	.....	239	149	1,183	1,571
Peru	.....	48,206	.....	296	48,502
United States	13,998	5,587,090	25,342	16,445	5,642,869
Total	28,919	6,637,815	33,826	89,760	6,790,320
1892.					
Belgium	.....	.....	.....	2,323	2,323
Chile	190,471	2,558,998	.....	.....	2,749,469
England	.....	65	15,328	41,927	57,320
France	.....	58	282	4,956	5,296
Germany	.....	.....	.....	31,532	31,532
Italy	.....	11,357	.....	2,084	13,441
Peru	.....	60,614	9,271	466	70,351
Spain	.....	.....	.....	79	79
United States	14,476	4,655,475	9,882	20,926	4,700,759
Total	204,947	7,286,567	34,763	104,293	7,630,570
1893 (first 6 months).					
Chile	60,827	642,022	.....	.....	702,849
England	.....	.....	228	39,928	34,156
France	.....	.....	50	454	504
Germany	.....	.....	.....	9,063	9,063
Italy	.....	297	.....	.....	297
Peru	.....	70	7,865	.....	7,935
United States	972	3,537,474	19,072	11,805	3,569,323
Total	61,799	4,179,863	27,215	55,250	4,324,127

DUTIES.

The duty on flour of all kinds and from all countries is about 3½ cents per kilogram; on wheat the duty is about 1⅓ cents per kilogram.

AMERICAN VS. CHILEAN FLOUR.

From the table given above it will be noted that about 80 per cent of all the flour imported comes from the United States, and the only manner in

which this trade could be increased is, of course, by an increase of population here, and when better facilities are established for transporting flour from here to the interior. Wheat is grown in the higher and cooler regions of the interior, and flour milled therefrom is of a fair quality. Only enough, however, is produced to supply the wants of the country immediately surrounding the wheat-growing district, as it costs more to bring flour from the interior to the coast on mule back than from San Francisco here.

The only reason Chilean flour is used here at all is because it is sold cheaper and delivered sooner, *i. e.*, taking less time to come here. A quintal (100 pounds) of Chilean flour, duty and all expenses paid, sells for what is equal to $3.80 in American gold, while American flour sells at $4.50. The Chilean flour is certainly inferior to the American, and the freight is, of course, less from Chile than from the United States.

The manner in which more American flour could be placed here would be by offering a little inferior grade of flour, say of the same quality as the Chilean, so as to sell here at the same price, or at a trifle less than the flour from that country. It is said, however, by all importers, that the Chilean will keep longer. They believe that this is due to the manner in which the wheat is ground, as the Chilean flour seems to be of a coarser grain. The bread made from American flour is much whiter than, and far superior to, that made from Chilean flour.

It might be noted that formerly the Chilean flour supplied this market almost exclusively, but the American product has almost entirely superseded it. The sole explanation is found in the superiority of the American flour.

In the exportation of biscuits to this country the United States, as will be seen, is far behind England and Germany. The English biscuit is sold here much cheaper than the American, and the German cheaper than the English. It is said here that the American biscuit seems to smell and taste too much of the lard used in its making. The manner in which the European biscuits are packed also recommends them to the trade. The fancy one-pound and half-pound tins, with patent tin-foil cover, readily opened with a penknife, sell in large quantities and are very convenient. One of these tins, containing half a pound net of biscuits, sells for about 22 cents.

GEO. G. DILLARD,
Consul-General.

GUAYAQUIL, *January 24, 1894.*

FALKLAND ISLANDS.

The people of these islands are ready to eat American flour. That which they now consume comes from Chile.

No American flour is imported into the Falkland Islands. During the three years ending June 30, 1893, 5,935 bags of 100 pounds each of Chilean flour were imported.

Wheat is not imported.

Monetary transactions are conducted by bills of exchange and money orders.

Shipping facilities are good via Great Britain. Sailing vessels come here direct.

The prospects for the introduction of American flour are good, if it is effected by enterprising Americans.

HENRY S. LASAR,
Consul.

PORT STANLEY, *February 20, 1894.*

PARAGUAY.

STANDARD OF LIVING.

The consular district of Asuncion comprises the Republic of Paraguay, and although the general "standard of living" can not be considered as high, or by any means equal to that which prevails in the United States, it is, nevertheless, continually rising. Since the standard of living is an important factor in the establishment of a trade, I may be pardoned for entering somewhat into detail in considering it.

At the close of the Paraguayan war against Brazil, Uruguay, and the Argentine Republic the population of this country had been reduced from 1,300,000 to somewhat less than 200,000, and many among the latter were foreign born. Statistics of this mournful period are not very reliable, but the above figures can not be far from the truth. At the opening of the war Francisco Solano Lopez was ruler of the country, and he had "inherited" the Presidency. He continued, and even exaggerated, the ultra-protectionist policy of his predecessors. He knew that his country was not so well adapted to the cultivation of wheat as her neighbor, the Argentine Republic, but insisted that if Paraguayans wanted wheat they should raise it for themselves, and that by so doing it would give them more work. This was undoubtedly true, for when an individual refuses exchange and insists upon producing for himself what some one else is better able to produce for him, he undoubtedly does give himself "more work." The result of his policy was the appearance of a few inferior wheat fields. They lacked the indorsement of nature to give them respectability, and consequently died a natural death. To-day there is not one acre of land, to my knowledge, throughout all Paraguay producing wheat, and the majority of the inhabitants live on maize and mandioca. Throughout the country districts a hard, wheaten biscuit is looked upon by many as a luxury. The Paraguayan people are ready and want to eat American flour, but the question is, will their respective governments allow them to trade freely for the satisfaction of that want? The Paraguayan Government has removed many of the restrictions that protection had imposed, and, consequently, the standard of living is rising, so that a way may be opened to the consumption here of American flour.

QUALITY OF FLOUR USED.

The best quality of flour is now used in Paraguay. The brands are known by the name of "Especial" and "Flor." I am informed by those who have used flour both here and in the United States that as good bread and pastry can be made from this flour as from any that is sold in the United States.

IMPORTS OF FLOUR AND WHEAT.

No American flour or wheat is imported into Paraguay. From other countries Paraguay has received during the three years ending June 30, 1893, between 7,000 and 8,000 tons of wheat flour and about 10,000 to 12,000 tons of wheat.

DUTIES.

The import duty on wheat flour at the Paraguay custom-house is $4 (paper) per sack of 90 kilograms, or about 60 cents in United States gold per barrel. It is said that this tax is imposed upon the people in order that the profits of the Paraguayan miller may be increased.

There is no import duty on wheat, it being claimed that free trade in wheat encourages the capitalist to erect flour mills by having the raw material of his business untaxed.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange with Paraguay are not of the best. The only banker in the United States, so far as I have been able to ascertain, who can effect such exchange is Mr. Einseidber, 15 Wall Street, New York, who is agent for the Crédit Lyonnais. It may be said that second-hand banking business conducted through France can not be equal to direct dealing. If trade could be established between the United States and Paraguay undoubtedly this objection would disappear.

The facilities for shipping are also deficient. There is a British line of steamers running from New York to the River Plate, and its steamships arrive only once a month, so that many find it convenient to send goods from the United States to this part of the world via Europe. A merchant vessel looks for the success of her trip, to a great extent, on what she can secure here for return cargo. A merchant vessel coming to the River Plate would now be likely to carry back to the United States a cargo of wool, but the tariff on wool in the United States is so great that few business men have cared to pay it. About thirty ocean steamers enter the mouth of the River Plate every month, but none of them fly the American flag.

OBSTACLES TO TRADE.

The principal obstacle in the way of the extension of trade in American flour in the Republic of Paraguay consists in the fact that we will not receive its products in payment for what the Paraguayans would purchase from us. Among these products may be mentioned wool, "caña" (a species of rum), tobacco, and fine cabinet woods. As to "caña," the tax on it entering the United States would be more than 200 per cent. In calculating whether I could send some fine cigars to the United States I found that the tax would be about 800 per cent, while as to fine woods, besides the tax, which is paid by the man who buys them, the commercial intercourse between the United States and Paraguay has been so little that purchasers of cabinet woods do

not know what Paraguay can produce in that respect, and consequently no demand has been created.

TRADE OUTLOOK.

In my opinion the prospects for doing a more extensive business in American flour in Paraguay were never so good as they are at present. The Republic of Paraguay is essentially an interior country. It has no seaport whatever; it has no railroad connection with the seacoast, and all vessels leaving Asuncion must pass through Argentine territory. None of her mines are at present developed. Those that were worked during the régime of Lopez have long since been abandoned. Maize, mandioca, tobacco, oranges, bananas, rum ("cañia"), and raw hides would all be remunerative productions under conditions of trade that were in any degree free, but the one article whose production would be capable of filling the country with wealth and giving to its inhabitants the blessings of civilization is "yerba mate," or Paraguayan tea. I have not space in an article of this sort to give in detail the many uses to which this plant can be put. It is enough to know that in Paraguay only can "yerba mate" be produced in perfection, and its use is only properly known in the countries contiguous to the River Plate. Brazil and the Argentine Republic produce it, but only in limited quantities and of an inferior quality.

All the wheat consumed in Paraguay comes from the Argentine Republic, but since the Paraguayan is not permitted to exchange his products freely with the Argentine (for tobacco, wood, "cañia," etc., are all heavily taxed there) the quantity of wheat that he is enabled to purchase must necessarily be limited. His neighbor in the Argentine Republic should be his natural customer, but so fierce is the tariff war now being waged against Paraguay that many merchants here seem to think there is great danger of Paraguay being actually starved into becoming an Argentine province, which, indeed, must happen unless she can find an outlet for her products. Some of her merchants are now trying to establish commercial relations with the United States, and I have to record to-day the first invoice of goods sent to the United States from Paraguay since the establishment of this consulate seven years ago. More consignments are now preparing for shipment to the United States, and should the business prove a success, American wheat must be the most important among the many articles that may be demanded in return, and hence I am moved to repeat that the prospects for doing a more extensive business in American flour in Paraguay were never so good as they are at present.

EBEN M. FLAGG,
Vice-Consul.

ASUNCION, *March 24, 1894.*

PERU.

CHICLAYO.

American flour is only exceptionally consumed in this district, as, for example, during the Chilean civil war. The flour consumed here is entirely from Lima, milled from Chilean wheat, the yearly consumption in this district being 3,000,000 pounds.

The quantity of American flour imported into this district in 1892 amounted to 70,000 pounds.

Bills can be procured for remittances.

The high freights from New York and San Francisco make shipping more difficult, and competition with Chile almost impossible; besides, the high duty on flour favors the importation of wheat so as to protect Lima milling interests.

Until the obstacles mentioned are removed little or no business can be done in American flour.

ALFRED SOLF,
Consular Agent.

CHICLAYO, *March 4, 1894.*

VENEZUELA.

CORO.

STANDARD OF LIVING.

The standard of living, judged by that which prevails in the United States, is not high in this district.

Indian corn is the principal food product. The working classes find in this grain satisfactory nutrition at a low cost; the higher classes prefer American wheat flour, but the high duty it has to pay prevents its greater consumption. The duty is more than the original cost of the flour.

IMPORTS OF FLOUR AND WHEAT.

American wheat flour is the only flour imported into this agency. I can not report the exact quantity imported, because the custom-house at this port has not the statistics. Approximately, 3,000 barrels of wheat flour are consumed in this state (Falcon) per annum.

Wheat is not imported.

EXCHANGE AND SHIPPING FACILITIES.

The commerce of this district has its principal seat here in Coro, and has all the facilities of exchange with New York, whence we receive all the American products used here, exporting goatskins in return. Coffee was formerly exported from this agency to the United States, but, owing to the nonacceptance by Venezuela of reciprocity, this product now goes to Europe. Every ten days we are in connection with New York by the Red D line, whose steamers call at Curaçao and there transship cargo and mail for Coro.

TRADE OUTLOOK.

The only obstacle I see in the way of extending trade in American flour is the high duty. There is no doubt if the people could eat a cheap flour bread a larger business would be done in American flour.

JOSIAH L. SENIOR,
Consular Agent.

CORO, *February 7, 1894.*

LA GUAYRA.

STANDARD OF LIVING.

The standard of living compares poorly with that of the working classes of the United States. Only the wealthier class eat wheat bread for daily food.

The people are ready to eat American flour, but its high price places it out of the reach of the common and poor people. The poor eat corn cake and "cassava," the latter being made from flour obtained from the root of the yuca plant, which has scarcely any nourishing qualities, and is a poor substitute for wheat bread. The principal bread for the poorer class is made of soaked corn, which is ground into paste. Large quantities of corn are brought here from the United States and ground into meal for the people, but the principal part of the corn is of native production.

QUALITY OF FLOUR USED.

The quality of flour used is very good, and the most of it is made from wheat grown in the United States.

Imports of American flour into La Guayra and agencies.

Imported into—	1891.	1892.	1893
	Barrels.	*Barrels.*	*Barrels.*
La Guayra	89,200	93,200	110,661
Ciudad Bolivar	12,000	11,000	13,000
Carupano	4,328	3,482	4,564
Cumana	3,100	2,800	3,860
Barcelona	1,100	980	2,800
Total	109,728	111,462	134,185

Flour other than American is not imported into this district.

There is no wheat brought to this part of Venezuela from the United States.

DUTIES AND PRICES.

The import duty on all wheat flour coming from the United States or any other country is 5 cents per kilogram (2¼ pounds), plus 12½ per cent internal revenue, the latter being collected at the same time. For example, a whole barrel has a gross weight of 212 pounds, or about 97 kilograms, which, at 25 cents Venezuelan (about 5 cents United States), plus 12½ per cent, amounts to 27.28 bolivars, or $5.25 (United States gold). To this add the first cost of the flour in New York, the commission, freight, and landing charges, and a barrel of good flour is found to cost, laid down in storehouse in La Guayra, about $10 (United States); in Ciudad Bolivar, about $12; and at Carupano, Cumana, and Barcelona, a little less than at Ciudad Bolivar. The selling price at Ciudad Bolivar, Carupano, Cumana, and Barcelona is about $13; at La Guayra, about $10.60; and at Caracas, about $11 per

barrel. At all points in the interior not reached by railroad it is very much higher. I am informed that the price at some of the interior cities is more than $20 per barrel.

Most all the flour is brought here in bags, as the difference in weight of a barrel and a bag is about 5 kilograms, which is quite a saving, since duty is charged on the gross weight.

There are no flour mills in this district. There used to be one at La Guayra, with a daily capacity of from 40 to 50 barrels. Wheat was then admitted free of duty. There is now a duty of a little less than one cent per pound on all wheat. No wheat is grown in this part of Venezuela.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are quite good, but were better when Venezuelan coffee was sold in the United States.

The facilities for shipping flour are good, as there are three lines of steamships from New York to Venezuelan ports.

OBSTACLES TO TRADE.

The great obstacle in the way of extension of trade is the high price, which is largely due to the very high duty. It is my opinion, the opinion of the consular agents, and of the leading importers in Venezuela, that more than double the amount of American flour would be consumed by the people of Venezuela every year if the price was lowered $2 to $3 per barrel, which could be done by reducing the import duty say 50 per cent, which would place this wholesome necessary of life within the reach of thousands of working people, to whom the taste of wheat bread is now unknown, and this great increase in consumption of flour would, it is thought, cause no decrease in Venezuela's total revenue.

It is my opinion, and that of most importers here, that some satisfactory arrangement could be made which would cause the above reductions.

It will be seen by the above statistics that, in spite of existing hindrances and the fact that there has been a decrease in the trade on some lines of American goods, there is still a steady increase in the demand for American flour in this district.

PHILIP C. HANNA,
Consul.

LA GUAYRA, *March 4, 1894.*

MARACAIBO.

STANDARD OF LIVING.

The standard of living, as compared with that which prevails in the United States, is not high. Plantains and maize constitute the standard food of the people generally, but American flour is largely consumed.

QUALITY OF FLOUR USED.

The quality consumed is a "fair" grade of American flour exclusively. The best brands are not imported.

IMPORTS OF FLOUR AND WHEAT.

Exact statistics of the imports into this district are not available, but the yearly change in the amount imported has been slight. A fair average would be 120,000 barrels per annum.

Only a few bags of wheat for seed in the mountain districts are imported.

All the flour and wheat imported are American.

DUTIES.

The import duty on wheat flour is 5 cents per kilogram, gross weight, and on wheat 2 cents per kilogram, gross weight.

EXCHANGE AND SHIPPING FACILITIES.

Although exchange with the United States is not a recognized business, it is possible to buy drafts on New York, as all the large mercantile houses of this district are in close relations with correspondents in that city. I say "possible," as it is by no means always certain, and there is no doubt that trade would be benefited by a better and more certain system of exchange.

The shipping facilities are excellent. The Red D line from New York has always given good service, augmenting transportation facilities as may be necessary. American sailing vessels may also be chartered direct to Maracaibo.

OBSTACLES TO TRADE.

On the coast there are no obstacles to trade, but in the Cordillera region, in the State of Los Andes, wheat is a staple product, and flour, though of poor quality, is produced to a certain extent.

TRADE OUTLOOK.

The prospects for the extension of business depend, in my opinion, upon three points—(1) increase of population, (2) improvement in the pecuniary condition of the masses, and (3) progress of culture and refinement through increased relations with the outside world.

We have nothing to fear in this branch of trade from foreign competition, and the natural increase in the consumption of flour, should the country remain tranquil, must be all in our favor.

A serious and standing obstacle to a rapid increase in the imports of flour is the great difference between the selling price at New York and the cost here, caused primarily by the duties imposed and by the incidental expenses of freight and handling, in addition to the large percentage of profits sought by the importers and dealers.

I have seen flour sold at Maracaibo for $20 (United States money) per barrel, which in New York did not cost more than $4, and from $13 to $15

is considered a reasonable average price. This flour, it will be remembered, is by no means a choice brand, and the light, sweet, palatable bread to be found universally in the United States and Europe is unknown here. To a great extent, however, this is the fault of the bakers, as even with the flour in use a much better bread could be furnished; and should the aërating or some other improved process be adopted, the better quality of the product might lead to a greater consumption of bread, and, consequently, a larger importation of flour.

As we already have the monopoly of this trade, I do not see that our exporters could do anything to extend it, as this extension could only be brought about by increased consumption here.

E. H. PLUMACHER,
Consul.

MARACAIBO, *March 22, 1894.*

PUERTO CABELLO.

The standard of living in this district is good, and the people consume only American flour of the best quality.

The following imports of flour (in bags of 100 pounds each) into this port are reported for the years ending June 30: In 1891, 75,000; in 1892, 90,000; in 1893, 120,000.

There is no wheat imported from any country, nor wheat flour, except from the United States.

Facilities for monetary exchange are confined to the merchants.

The facilities for shipping from the United States are very good. The Red D line of steamships makes this port from New York every eight days laden with American products. A Dutch line of steamers also arrives in this harbor once a month with cargoes from the United States; besides, we have arrivals of sailing vessels.

The principal obstacle in the way of an increase of trade in American wheat flour is the very high duty. Nevertheless the trade increases, and the prospects for doing a more extensive business are good.

WILLIAM G. RILEY,
Consul.

PUERTO CABELLO, *January 24, 1894.*

SAN CRISTOBAL.

STANDARD OF LIVING.

The general standard of living in this district is only fair. This district being essentially agricultural, the greatest part of its inhabitants raise what they need for consumption—that is to say, potatoes, rice, tapioca, pease, wheat, etc. They are very modest in living, and only the inhabitants of the

few small villages are willing to spend money for imported provisions. The climate in some parts permits the cultivation of wheat, and the wheat consumption of the district might be supplied by its own product were it not for the fact that the local mills are of a very primitive style, unfit to produce good flour. Notwithstanding its high price in comparison with the native flour, American wheat flour is introduced in some quantity. Native flour is generally mixed with American in order to render the bread cheaper, but, of course, bread made of pure American flour is preferred.

QUALITY OF FLOUR USED.

Besides the very ordinary native flour, only good American flour is used.

IMPORTS OF FLOUR AND WHEAT.

There are no official data of any kind to be obtained here concerning importations, and all foreign goods reach here through Maracaibo, so that the imports at that place cover the amounts consumed here. I estimate the consumption of American flour in this district for the years 1891, 1892, and 1893 as follows: In 1891, 25,000 bags; in 1892, 25,000 bags; in 1893, 30,000 bags.

No wheat flour is imported from any other country than the United States.

Save a few bags for seed, wheat is not imported into this district.

EXCHANGE FACILITIES.

Bills of exchange are always easily obtained from the export houses at a very small premium or none at all.

OBSTACLES TO TRADE.

American flour is without any competition from the product of other countries, so that there are no obstacles to the extension of the trade save its high price, which limits its consumption.

In my opinion, as long as the high prices of coffee (the principal export) last, people here will not think of improving their mills, and thus American wheat flour will be without competition, even of the native flour, which is only consumed by those who can not afford to buy the better American grades.

J. A. LALLEMANT,
Consular Agent.

SAN CRISTOBAL, *January 31, 1894.*

WEST INDIES.

ANTIGUA.

STANDARD OF LIVING.

The standard of living in this district is low. Most of the flour imported is of the lower grades.

IMPORTS OF FLOUR AND WHEAT.

For the years 1891, 1892, and 1893 the quantities of American flour imported amounted to 28,195, 36,298, and 32,500 barrels, respectively. The figures for 1893 are partly estimated.

No wheat is imported, and little flour other than that imported from the United States; 3,500 barrels will cover the importation from other sources for the years mentioned.

EXCHANGE AND SHIPPING FACILITIES.

There is a branch of the Colonial Bank in Antigua where drafts may be had on New York or London.

The Quebec Steamship Company's vessels come here direct from New York, stopping at the different islands, at frequent intervals.

DUTIES.

The import duty is 84 cents per barrel, with an additional trade tax of 10 cents per barrel. The same applies to flour coming from other sources.

TRADE OUTLOOK.

The demand depends somewhat on the price of flour, as well as on the conditions prevailing here. At present there is no reason to anticipate any particular change in the trade.

JAMES C. FOX,

ANTIGUA, *February 7, 1894.* *Consul.*

BAHAMAS.

STANDARD OF LIVING.

The standard of living in this colony is not very high, owing to the fact that the people, as a rule, are poor. Among the few who are possessed of means the standard is higher, of course. They are all ready to eat, and do consume a fair quantity of, American flour.

QUALITY OF FLOUR USED.

What is known as numbers 0 and 1 are used by bakers and moderately by others. The quality most used is No. 2. The very poor people use No. 3. No. 0 retails at, say, $8 per barrel, No. 1 at $7, No. 2 at $6, and No. 3 at $5.50.

IMPORTS OF WHEAT AND FLOUR.

I can not give statistics for years ending on June 30, but during the calendar year ending December 31, 1890, there were imported 34,087 barrels of American wheat flour, entered at a valuation of $144,423.08; during the year 1891, 27,561 barrels, valued at $126,497; and during the year 1892, 35,873 barrels, valued at $135,107.10.

No wheat flour worth mentioning is ever imported from any country except the United States.

No wheat is imported from any country other than the United States.

DUTIES.

The import duty on American wheat flour is 60 cents per barrel, and 10 per cent ad valorem in addition. The import duty on American wheat is 20 per cent ad valorem. No discrimination is made in duties between different countries.

EXCHANGE AND SHIPPING FACILITIES.

Facilities for monetary exchange are good. A good bank sells exchange at moderate premium on New York and London, and offers all customary banking accommodations.

Shipping facilities from the United States are good. Three steamers leave New York for this port and return during each month. The time of passage is from three and a half to five days. Occasional sailing vessels are also going to and fro between this port and several American ports.

OBSTACLES TO TRADE.

The only obstacle in the way of increasing the sale of American flour is that the present demand for flour is fully supplied.

TRADE OUTLOOK.

I do not see any prospect for an immediate increase in the trade in American flour. The colony is a small one, with a population of only about 50,000. Considerable corn is raised in the out islands, and upon the character of this crop each year depends, somewhat, the quantity of flour called for. When the season is a poor one more flour will be imported, and vice versa. As the population increases, more flour will be demanded; or, if the people become more prosperous, the demand for flour will be likely to increase. It is expected that a decided increase in colonial exports will occur very soon, owing to the fact that sisal hemp will soon be coming into the market in large quantities, and the profits from this industry will proba-

bly enable the colonists to live in a more generous manner than heretofore, and more flour will be consumed.

Whatever increase in the flour trade may be developed, it will all go to the United States, since we entirely control the trade at present. The colony is now taking all the flour it can use, or can afford to buy, and we furnish all of it, the trade being substantially in the hands of two large commission firms located in New York.

THOS. J. McLAIN,
Consul.

NASSAU, N. P., *December 29, 1893.*

BERMUDA.

The standard of living in this consular district is similar to that of our New England States. The quality of flour used ranges from medium to No. 1.

The quantity of American flour imported into this consular district during the calendar year ending December 31, 1893, amounted to 18,574 packages, and during the year 1892 to 19,121 packages. For the year 1893 the statistics have not yet been compiled, but I am informed that the probable result will be an increase over previous years.

There is no demand here for wheat except in a mixture of other products, when it is entered under the head of "feed," being classified as "feed" and intended for poultry.

The only other country from which wheat flour was imported was Canada, and was as follows: During the year ending December 31, 1891, 253 packages; 1892, 1,482 packages.

In answer to questions 9, 10, 11, and 12, I would say that there is no discrimination in duties as regards the country of production, the rate being uniformly 5 per cent ad valorem.

The facilities for monetary exchange comprise a public bank and two or three private banking institutions, all of which are conducted upon a sound system.

With the exception of sailing vessels, the only facilities at present offered for shipping from the United States are those provided by the Quebec Steamship Company, at New York.

At present there are no obstacles in the way of an extension of trade in American flour, unless it be possibly a fast decreasing competition on the part of Canada.

The demand for American flour being practically beyond competition, and the supplies now on hand being almost wholly the product of the United States, I can see no prospects for a more extensive trade in this line, unless through an increase in population.

Owing to several improvements of a public nature, now under consideration, it is predicted that in the course of a few years there will be a large increase in the commercial importance of these islands. For that reason it would be well for our manufacturers to maintain the hold which they at present possess on the trade of Bermuda.

Owing to the geographical position of these islands, our manufacturers are given an advantage which no other nation possesses. The inhabitants are almost wholly dependent upon the United States for food. Business here is conducted upon a safe basis and credit is remarkably good. Add to this the fact that there is no discrimination in duties and it will be seen that the American manufacturer starts off more than even and with everything in his favor in his trade intercourse with Bermuda.

JOHN H. GROUT, Jr.,
*Consul.**

HAMILTON, *January 3, 1894.*

CUBA.

BARACOA.

The standard of living in this district is good. All the flour consumed comes from the United States. Wheat is not imported into this district.

The imports of flour during the years 1891, 1892, and 1893 (years ending June 30) were 347,600 pounds, 650,436 pounds, and 690,110 pounds, respectively.

W. B. DICKEY,
Consul.

BARACOA, *January 12, 1894.*

CIENFUEGOS.

The standard of living is good, and the people are ready to eat American flour. The best quality of flour is most used.

The imports of wheat flour during the years ending June 30, 1891, 1892, and 1893, were as follows:

Kinds.	1891.	1892.	1893.*
	Sacks.	*Sacks.*	*Sacks.*
American (sacks of 185 pounds)	13,921	49,127	78,119
Spanish (sacks of 185 pounds)	46,008	18,500	.....

*From July 1 to December 31, 1893, 32,576 sacks of the same average weight as above were imported. The numbers given are official and were taken from the custom-house books.

Wheat is not imported.

There are three banking houses in Cienfuegos.

*The Consul at St. George's, Bermuda, reports that all the wheat flour consumed in his district is American.

Shipping facilities are good, steamers and sailing vessels plying from and to all seaports in the United States.

I know of no obstacles to American trade.

I can not see any prospects of an increased business in this line.

HENRY A. EHNINGER,
Consul.

CIENFUEGOS, *January 5, 1894.*

MATANZAS.

IMPORTS OF FLOUR AND WHEAT.

The quantities of wheat flour imported at this port for the three years ending June 30, 1893, were as follows:

Year.	From United States.	From Spain.
	Pounds.	*Pounds.*
1891	1,163,509	3,511,200
1892	3,692,406	1,574,135
1893	7,901,272	.....

No flour other than that from the United States was imported in 1893. Wheat is not imported into this district.

The great increase above noted is the result of the cheapening of the flour, and, in consequence, its more general consumption by the working classes. As we have the entire trade now, it follows that any further increase must arise from increased consumption. I believe this increase may yet be appreciable, but not to any great extent, although very little flour is used by the working classes in the interior.

ELIAS H. CHENEY,
Consul.

MATANZAS, *February 27, 1894.*

NUEVITAS.

The food of the people of this district consists of rice, flour, beef, pork, and vegetables. About 12,000 bags of East Indian rice of the cheapest grade are imported annually from Liverpool.

The imports of flour during the years 1891–'93 were as follows:

Description.	1891.	1892.	1893.
	Sacks.	*Sacks.*	*Sacks.*
American	6,200	12,000	20,670
Spanish	6,403	1,198	.....
Total	12,603	13,198	20,670

Wheat is not imported into this district.

Monetary exchange is effected through Havana drafts on American banks. The shipping facilities are ample—steam and sail.

RICHARD GIBBS,

NUEVITAS, *February 19, 1894.* *Commercial Agent.*

CURAÇAO.

The wheat flour used by the people here (Curaçao) is imported exclusively from the United States, and is of the ordinary grade. Shipments are made weekly from New York direct to this port by steamers and sailing vessels. The duty is 1¼ per cent ad valorem. The quantity imported can not be ascertained from the official statistics, as this article does not appear therein under a separate heading; but it can be safely estimated at about 12,000 barrels annually.

L. B. SMITH,

CURAÇAO, *February 23, 1894.* *Consul.*

JAMAICA.

STANDARD OF LIVING.

Owing to the poverty of the majority of the population of this island, the standard of living is not high, and sweet potatoes, yams, plantains, bananas, and breadfruit are used as a substitute for bread. This in part accounts for the fact that a population of nearly 700,000 consumes only 175,000 barrels of flour per annum.

QUALITY OF FLOUR USED.

The quality most used is a graded flour manufactured by the mills of New York city. It is well adapted to the climate, and no fault is found with it.

IMPORTS OF WHEAT AND FLOUR.

The United States furnish all of the wheat and more than 99 per cent of the wheat flour imported into this island. The following table gives the quantity of wheat and wheat flour imported here for the past three years ending the 30th of June of each year:

Year.	Wheat.	Wheat flour.		
	American.	American.	Other.	Total.
	Bushels.	*Barrels.*	*Barrels.*	*Barrels.*
1891	781	177,194	167	177,361
1892	1,478	171,294	1,458	172,752
1893	1,797	165,450	446	165,896

From these figures it will be seen that the people of Jamaica eat American wheat flour almost to the exclusion of that of every other country.

DUTIES.

There is no discrimination against American wheat flour or wheat, the duty on flour and wheat from all countries being the same—8*s.* ($1.94) per barrel of 196 pounds on flour and 6*d.* (12 cents) per bushel on wheat. There is only one flouring mill upon the island, and that is of such small capacity that it can hardly be dignified by the name. This being the case, it is unnecessary to say that some American capital might be well invested in the establishment of flouring mills here if the present rate of duty is to remain.

OBSTACLES TO TRADE.

The only obstacles in the way of the extension of trade in American flour known to me is the excessive duty, it being about 50 per cent ad valorem. If it were reduced one-half I am satisfied the consumption would be greater, because the cheaper the necessaries of life are the more they will be used. No other country can compete successfully with us for this trade. In 1891 and 1892 Canada made strenuous efforts to capture it, but, owing to freights, prices, etc., soon discovered her disadvantage.

SHIPPING FACILITIES.

The shipping facilities from the United States to this island are excellent. One steamship company runs regularly bimonthly and sometimes weekly steamers from New York to this port, while there are numerous "tramp" steamers. From the out ports on the north side of the island there is semi-weekly communication either with Boston, Baltimore, Philadelphia, or some other port. Sailing vessels are also constantly plying from this city and the out ports of the island to the principal ports of the United States.

Facilities for monetary exchange are also excellent.

Q. O. ECKFORD,
Consul.

KINGSTON, *January 15, 1894.*

SANTO DOMINGO.

STANDARD OF LIVING.

The standard of living in this district is not very high, as the people are in the main poor. To a certain extent American flour is a necessity.

QUALITY OF FLOUR USED.

Only a good quality of flour is salable. The favorite brands are "Crystal," "Two Cities," "Favorita," and "Preciosa."

IMPORTS OF FLOUR AND WHEAT.

The quantities of American wheat flour imported at this port and at the Monte Christi agency were as follows: In 1891, 12,471 barrels; in 1892, 10,364 barrels; and in 1893, 11,527 barrels.

No flour other than American is imported. Wheat is not imported.

DUTIES.

The duties on American flour amount to about $4.50 (Mexican) per barrel.

The Dominican tariff does not mention wheat, but as the reciprocity treaty declares free of duty rye, oats, and some other cereals, it is to be supposed that if imported it would be subject to an ad valorem duty.

Flour from other countries, if imported, would pay the same duty as that from the United States.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are poor. The principal crop of this district is tobacco, which is exported to Germany, and against this bills are drawn by merchants to pay their accounts in the United States. There is no bank in this district.

The facilities for shipping from the United States are good, a line of steamers from New York touching here about once in three weeks.

OBSTACLES TO TRADE.

The only obstacle to an increased trade is the fact that no more flour can be consumed. During some years, on account of dry weather, the crop of plantains falls short, and a large amount of flour and rice has to be imported. For the above reason I do not see any prospect for a more extensive business in American flour.

THOS. SIMPSON,
Consul.

PUERTO PLATA, *February 24, 1894.*

ST. CROIX.

CHRISTIANSTED

The standard of living in this district is ordinary, the staple food of the country being American corn meal and wheat flour.

The flour most used is a medium quality.

The quantity of American wheat flour imported into this district during the years ending June 30, 1891, 1892, and 1893, was as follows:

Year.	From the United States.	From St. Thomas.*	From Halifax.	Total.
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*
1891	815,995	11,899	234,023	1,061,917
1892	820,465	40,393	.....	860,858
1893	725,530	123,421	6,726	855,667
Total	2,361,990	175,713	240,739	2,778,442

* Principally American.

American wheat has never been imported into this district.

In my opinion there is no room for a more extensive trade in American flour.

A. J. BLACKWOOD,
Consular Agent.

CHRISTIANSTED, *January 28, 1894.*

FREDERICKSTED.

The quantity of American wheat flour imported in the years ending June 30, 1891, 1892, and 1893, was 996,000 pounds, 1,058,000 pounds, and 786,500 pounds, respectively, and the quantity of wheat flour imported from other countries during the same periods was as follows:

From—	1891.	1892.	1893.
	Pounds.	*Pounds.*	*Pounds.*
St. Thomas*	30,330	71,000	46,300
Other countries	706	.....	27,342

* Principally American flour.

No wheat from any country was imported in those years.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are the Colonial Bank and an agency of the Bank of St. Thomas, both having agencies in New York.

The facilities for shipping from the United States to this port are furnished by the Quebec Steamship Company—steamer twice a month—and frequent sailing vessels from New York.

WM. F. MOORE,
Consular Agent.

FREDERICKSTED, *January 15, 1894.*

ST. THOMAS.

QUALITY OF FLOUR USED.

The best quality of wheat flour, such as "Pearl Mills," is used.

The people are dependent on the United States for all farinaceous food.

IMPORTS OF FLOUR.

The statistics at the custom-house are made up on March 31 of each year. The following table gives the import of flour for the years ending on that date:

Description.	1891.	1892.	1893.
	Barrels.	*Barrels.*	*Barrels.*
American	16,722	12,243	13,255
Other	701	1,632	1,823
Total	17,423	13,875	15,078

During the same period there was no wheat imported.

DUTIES.

The import duty on all articles from all countries is 3 per cent.

EXCHANGE AND SHIPPING FACILITIES.

The Colonial Bank and the Bank of St. Thomas constitute the facilities for monetary exchange.

Frequent sailing vessels arrive here. The Quebec Steamship Company's steamers arrive irregularly. They are not to be depended on at any time.

TRADE OUTLOOK.

There are no obstacles in the way of the extension of trade in American flour in this market. The people are perfectly satisfied with American wheat flour.

About one-half of the imports mentioned from foreign countries were from St. Croix and of American production. When there is a scarcity of flour here (generally caused by several war vessels being in port) merchants have to order flour from St. Croix until they receive a fresh supply, which they quickly cable for.

In conclusion, I beg to state that no official statistics are procurable in reply to questions 3, 4, 5, 6, 7, and 8; but the figures given are authentic, having been furnished me by the superintendent of customs.

J. H. STEWART,
Consul.

ST. THOMAS, *January 10, 1894.*

TRINIDAD.

STANDARD OF LIVING.

The standard of living in Trinidad is probably not so high as that of the colored people of the Southern States. There are three distinct classes, in respect to food consumption, in this island. The first embraces the commercial and professional class and others who gain their livelihoods by manual labor, the second embraces negro laborers, and the third coolie laborers—East Indians and their descendants. The first class probably live as well as the corresponding class in the United States, the second like the negro laborers of our Southern States, but the third class (coolies, who compose about 35 per cent, or, say, 75,000, of the population of the island) put up with a much lower standard of living. The coolies use comparatively little flour, but live principally upon rice imported from India. As a rule they practice great economy, and rice, to which they have always been accustomed, is much cheaper than flour.

QUALITY OF FLOUR USED.

Several grades or brands of flour are imported here, and I think it probable the quality used will average as high as that in general use in the United States.

IMPORTS OF FLOUR AND RICE.

The custom-house entries are adjusted by calendar years, and the following table gives the imports of flour for 1891, 1892, and 1893:

Whence imported.	1891.	1892.	1893.
	Barrels.	*Barrels.*	*Barrels.*
United Kingdom	3	4	4
British East India	230	51	.....
British North America	157	1,973	1,820
British West Indies	410	282	790
United States	113,522	130,953	144,939
All other countries	2	.....	2
Total	114,324	133,263	146,955

The flour entered as from British West Indies is principally, if not exclusively, American flour reshipped.

The importations of rice amounted to 23,422,176, 22,079,290, and 23,776,654 pounds in 1891, 1892, and 1893, respectively.

DUTIES.

The custom-house duty on flour prior to January 9, 1892 (the day on which the tariff as readjusted to conform to the reciprocity agreement went into operation) was 3*s.* 4*d.* per barrel; after that date it was 3*s.* 1½*d.* per barrel. This decrease of custom-house duty was probably too slight to be of any appreciable assistance to flour in competing with rice—the duty on rice (2*s.* 2*d.* per 100 pounds) remaining unchanged.

TRADE OUTLOOK.

The increase of the flour trade comes more from an increase in the standard of living than from an increase of the population. The increase of the population of the island by immigration is principally due to the importation of laborers from India, and, of course, more favorably affects rice than flour importations.

American flour almost completely controls this market. For the last year or two considerable effort has been made to build up a trade in Canadian flour, and some little headway has been made, but the trade in American flour can not, it is believed, be checked by fair competition.

WM. P. PIERCE,

TRINIDAD, *March 22, 1894.* *Consul.*

TURKS ISLAND.

STANDARD OF LIVING.

The inhabitants of this district live principally upon corn meal, hominy, wheat flour, salted meats, and fish. Nine-tenths of the wheat flour consumed is imported from the United States. The cheapest quality of flour is mostly used.

IMPORTS OF FLOUR.

The quantities of American wheat flour imported into this district during the years ending June 30, 1891, 1892, and 1893, were:

Year.	Quantity.	Value.
	Barrels.	
1891	2,537	$12,193
1892	2,581½	10,807
1893	2,616	11,011

The following quantities of wheat flour were imported from other countries during the same years:

Imported from—	1891.		1892.		1893.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Barrels.		*Barrels.*		*Barrels.*	
Barbados	3	$18.58	.....	.....	6	$34.68
Demerara	.....	.....	4	$27.30	.....	.....
Guadeloupe	.....	.....	11	53.46	.....	.....
Halifax	20	118.34	150	703.06	120	587.20
Jamaica	17½	110.92	5	35.86	11	72.44
St. Thomas	.....	.....	6	26.46	.....	.....
Trinidad	5	25.00	.....	.....	4	20.00
Total	45½	272.84	176	846.14	141	714.32

No wheat is imported into Turks Island.

DUTIES.

The import duty on American wheat flour is 90 cents per barrel. There is no import duty on wheat. There is no discrimination in imposing duties here in favor of Great Britain, the import duties on articles coming from Great Britain being the same as on those imported from the United States.

EXCHANGE AND SHIPPING FACILITIES.

Having no established banks in this district, the facilities for monetary exchange are very limited. Persons importing from the United States can occasionally purchase bills of exchange from the merchants who ship salt to the United States. Post-office orders can only be purchased for Great Britain and Jamaica.

Wheat flour and other commodities can be shipped at New York for this district at intervals of about three weeks.

TRADE OUTLOOK.

Owing to the limited population of this district, the consumption of wheat flour is not likely to increase to any considerable extent. Almost all of the wheat flour consumed here is imported from the United States.

E. J. D. ASTWOOD,
Vice-Consul.

TURKS ISLAND, *January 25, 1894.*

CAPE HAITIEN.

American flour is the only flour imported into this consular district, and it is greatly liked by the people. Wheat is not imported into Haiti.

The favorite brands are "La Rubio," "La India," "El Trocadero," "Esmeralda," "Ne Plus Ultra," and "Two Cities." As the people are poor they prefer the cheapest brands.

The duty on flour is $3.93 (Haitien currency*) per barrel.

The importation of flour at Cape Haitien during the three years ending June 30, 1891, 1892, and 1893, was as follows:

Year.	Barrels.	Half barrels.	Quarter barrels.
1891	16,410	4,780	5,490
1892	20,950	5,275	7,540
1893	18,755	6,710	8,265
Total	56,115	16,765	21,295

The Haitiens generally ship their coffee and other products to Europe, the prices obtained there being higher than those ruling in the United States, and American correspondents are paid in drafts drawn on Europe.

* The Haitien silver gourde was worth, according to the United States Treasury valuation tables, 96.5 cents on April 1, 1894.

As will be seen by the foregoing statement, the flour trade here is already large. The only increase that can be looked for is that which results from drought, which curtails the plantain crop, plantains being largely used by the natives for "bread." In seasons of drought flour is imported to supply the deficiency in plantain food. On the other hand, when plantains are abundant there is a corresponding decline in the imports of flour.

STANISLAS GOUTIER,
Consul.

CAPE HAITIEN, *March 28, 1894.*

BRITISH INDIA.

STANDARD OF LIVING.

The standard of living of the great mass of the 300,000,000 people who compose the population of India is very low. The wants of the people are few, and most of them are content to earn enough to sustain life. If the crops fail, they die of famine. The periodic famines which have ravaged India from time immemorial have been to some extent mitigated by the great irrigation works carried on by the Government. The extension of the rail-road system has also been of great benefit in transporting cheaply the surplus of one district to another where there is a scarcity. The staple food is rice and beans.

Flour can never figure to any extent in the bill of fare of a people as poor as the inhabitants of India. An able-bodied agricultural laborer earns about $1.80 per month; a common blacksmith, mason, or carpenter will get $4.20 a month. In many parts of India it would not be more than half of this, but taking the country over these would be good average wages. Other labor is paid in proportion.

QUALITY OF FLOUR USED.

A large quantity of wheat is ground by the mills of the country, and these furnish the greater part of the flour consumed by the people. These mills are increasing their output and improving its quality. It is not possible to make flour from Indian wheat equal to the best grades of American. For this class of flour (American), however, the demand is very limited. It is pretty much confined to Europeans, who are few in number.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are ample. The numerous banks are able to handle any amount of business.

The facilities for shipping from the United States are good, and are afforded by numerous lines of steamers from Great Britain for the Atlantic and several lines of steamers to Hongkong and the Chinese ports, where goods are transshipped to or from the Pacific Coast. There is also much trade done in sailing vessels direct. All this freight goes into the pockets of English owners, masters, and seamen. American ships have practically disappeared from these waters.

IMPORTS OF FLOUR AND WHEAT.

I have not been able to obtain from the official statistics the exact quantity of American flour imported, as it is nearly all from California, and is entered

as coming from Hongkong and the Straits Settlements. As it comes in small shipments by every steamer, each one of these small importations would have to be traced back to insure perfect accuracy. The figures given, however, are, for all practical purposes, correct. The prices are official, taking the rupee at 30 cents, which has been about its average value during the three years given.

Description.	1890–'91.		1891–'92.		1892–'93.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Imports:						
Wheat.....cwts...	124,135	$159,544	345,912	$458,322	102,523	$140,618
Flour.....pounds...	1,526,114	38,306	1,399,655	38,682	1,216,581	39,955
Flour from the United States.....pounds...	670,456	18,729	830,992	23,811	831,706	24,622
Exports:						
Wheat.....cwts...	14,320,496	18,127,278	30,303,425	43,141,386	14,973,453	22,321,190
Flour.....pounds...	47,035,853	818,669	61,008,205	1,084,757	57,940,360	.....

OBSTACLES TO TRADE.

The probability of any great extension of the market for American flour is small. The chief obstacles in the way are that India is a great wheat producing and exporting country, together with the fact that but few of the people earn enough to enable them to buy flour which the American people can afford to produce. The flour used by the natives is a coarse, low grade. There is no import duty on wheat or flour from any country.

VAN LEER POLK,
Consul-General.

CALCUTTA, *February 7, 1894.*

CHINA.

CANTON.

It is not easy to obtain anything like accurate information as to the quantity of flour and wheat brought from the United States into this province of Kwangtung; but on January 27, 1892, after carefully examining the facts as to this trade, in company with an extensive miller from California, who sends considerable flour to Hongkong and China, I wrote to the Department that the quantity of American flour received in the province of Kwangtung amounted annually to about 100,000 barrels. There are no trade statistics accessible here. Nearly all of the American flour is sent from San Francisco to Hongkong by Chinese merchants in exchange for Chinese merchandise, and it is sold by Chinese dealers in Hongkong to their customers in this province. This trade has steadily increased and is increasing. I think that in 1893 about 123,000 barrels of flour came from the United States into this province. There is but little wheat imported.

Nearly all of the wheat flour received by China is from California. The flour usually comes in 50-pound sacks, and as pleasant evidences of this trade are visible in numerous sails made of flour sacks for small boats used by the natives on the Canton River, one is reminded that the American flour trade is in vigorous operation. Still, the multitude of natives continue to consume rice as their staple article of food.

CHARLES SEYMOUR,
Consul.

CANTON, *March 12, 1894.*

HANKOW.

STANDARD OF LIVING.

The quantity of flour consumed here varies according to the demand of foreign residents or the means of the natives. The latter live very economically, subsisting on anything that they can afford to purchase—rice, wheat, beans, fish, fowls, and a little meat. They would use American flour if they could afford to do so.

QUALITY OF FLOUR USED.

The consumption of foreign flour is confined to the foreign population, who purchase none but the best California brands, though some is used by the native bakers. The natives use domestic flour.

IMPORTS OF FLOUR AND WHEAT.

The quantity of foreign flour received at this port is so small that it is not classified at the customs except as sundries. No tabulated record is kept of it.

No wheat is imported.

EXCHANGE AND SHIPPING FACILITIES.

Monetary facilities are ample and exchange good. A number of responsible banking houses are located here, sufficient to meet all demands.

Shipping facilities are also good. A number of lines of boats on the Yangtze, carrying a daily mail, connect with ocean steamers at Shanghai. Stern-wheel boats also run regularly to Ichang, 400 miles above this port.

OBSTACLES TO TRADE.

There are no obstacles to the extension of trade but the price and cost of carriage, the latter being moderate, owing to active competition.

It would be impossible to increase the importation of flour to any considerable extent at the present cost of raising wheat here, owing to the low price of labor. American flour sells here at $2.25 per sack of 50 pounds and retails at 6 cents per pound. Native flour, which is considered more nutritious, retails at 2 cents per pound and frequently for much less. It is dark and unbolted, and is ground in small mills.

The wheat-growing area is quite extensive in this province, extending for many miles along the river, and supports a large population. Lying in the valley of the Yangtze, during the summer months most of it is overflowed, but as soon as the waters recede in the fall it is broken up and seeded with wheat, as has been the custom for centuries, the deposits left by the receding water fertilizing the land. An entire failure of crops is unknown here. The grain is harvested before the annual summer rise, and yields from 7 to 10 piculs* per acre. This land could not be utilized for any other purpose except for the cultivation of some hardy vegetables that could stand the frosts of winter. Wheat brings from $1.40 to $1.80 per picul. A picul of wheat varies in weight from 120 to 130 catties,† according to quality. The standard of currency here is the Mexican dollar.

Considerable wheat is exported from this port for home consumption, to wit: In 1892, 68,744 piculs; in 1893, 112,359 piculs.

It is with great difficulty that anything like accurate estimates can be obtained in this section.

JACOB T. CHILD,
Consul.

HANKOW, *July 12, 1894.*

*1 picul=133⅓ pounds. †1 catty=1⅓ pounds.

HONGKONG.

STANDARD OF LIVING.

The total population of the colony of Hongkong and its dependencies is estimated at about 240,000, of which number about 9,000 are Europeans of various nationalities, about 3,000 are Indians and other Orientals, and the remainder are Chinese.

The standard of living among the European contingent is much the same as in Europe and America, but as the great mass of the population consists of Chinese, who use rice as a substitute for flour, it can not be said that the people as a whole are ready to eat American flour, except in comparatively small quantities in the form of cakes and sweetmeats.

QUALITY OF FLOUR USED.

About 75 per cent of the total imports of American flour consists of the "best extra" quality and 25 per cent of lower grades.

IMPORTS OF FLOUR.

The imports of wheat flour into Hongkong during the years ending May 31, 1893, were as follows:

Year.	From—		Total.
	San Francisco.	Tacoma and Vancouver.	
	Quarter sacks.	*Quarter sacks.*	*Quarter sacks.*
1891	1,692,174	506,166	2,193,340
1892	1,235,515	337,715	1,573,230
1893	1,519,093	539,809	2,058,902

There are no grist mills here, hence wheat is not imported.

I may add that as there is no custom-house at Hongkong, it being a free port, no official statistics can be given. The above figures were obtained from the largest importers of flour in Hongkong, and are exact.

EXCHANGE AND SHIPPING FACILITIES.

There are several large banks, besides numerous Chinese money-changers.

There are three lines of steamships from the United States, two from San Francisco and one from Tacoma. The Canadian Pacific mail steamers from Vancouver also take freight from the northern Pacific ports of the United States.

OBSTACLES TO TRADE.

The only obstacle to the extension of trade in American flour in this district is that already suggested, namely, that it is more expensive than

rice, and the Chinese, who form the great bulk of the population, can not afford to substitute flour for the cheaper grain, even if they wished to do so.

TRADE OUTLOOK.

The proposed opening up of new portions of the Yellow River to European traffic, and the reduction of duties at Canton, which is expected to accompany this action, must, in my opinion, increase the consumption of flour among the inhabitants of southern China.

W. E. HUNT,
Consul.

HONGKONG, *February 1, 1894.*

NINGPO.

STANDARD OF LIVING.

The standard of living of the poorer classes is so low that no comparison can be made with any class of inhabitants of the United States. The principal article of food is rice, and sometimes a little fish, rarely meat. What would be an ordinary meal to the laborer in the United States would be an undreamt-of feast to the man here engaged in like work. In the domain of labor the laborer in the United States is the best fed, and the laborer here is the worst fed. It is marvelous to see with how little real nutritive food the laborer, or, as he is termed here, the coolie, manages to exist. What the coolie consumes during the day would not form a breakfast for a laborer at home.

The results of the difference in living is seen in the amount of work accomplished at the end of the day, one man in the United States easily doing more than the combined efforts of six coolies here. Generations of poorly fed men have resulted in a race of low vitality and of little stamina. The constant diet of rice has tended to cause many diseases of the eye, and I am told that 90 per cent of all the cases of ophthalmia and kindred diseases are caused by this food.

QUALITY OF FLOUR USED.

I have repeatedly endeavored to get the Chinese here to buy our Indian meal, for it is not only cheaper than rice, but, of course, more sustaining. Rice is the staple article of food, its use being more universal than is that of flour in the United States. But little bread is made of flour or meal of other cereals. The flour mostly used is made of chestnuts, potatoes, or rice.

The American wheat flour used in this port is called "Golden Gate," and is used by the bakers for making cakes and pastry.

IMPORTS OF WHEAT AND FLOUR.

The following table of imports of American wheat flour for the years ending June 30, 1891, 1892, and 1893, was kindly furnished me by the

commissioner of customs, the published returns not giving the desired data:

	Pounds.
1891	652,947
1892	834,103
1893	770,461

The above includes only the importation by steamers from Shanghai. No account can be had of the quantities taken into the province by transit passes overland from Shanghai, and no mention is made of flour in the Wenchow tables of imports. It may be safely stated that the above represents not more than two-thirds of the actual importation of our flour into this district.

No wheat is imported from any country, and flour only from the United States.

EXCHANGE AND SHIPPING FACILITIES.

There are no banks here doing a foreign-exchange business, all such business being transacted in Shanghai.

There is no reason why ships can not make direct voyages to this port. Years ago this harbor was constantly filled with ships from the Atlantic ports of the United States, but it is years since a ship from the United States has put in here. Three years ago, however, a ship left New York bound direct for Ningpo, but, unfortunately, was wrecked before reaching the coast of China.

I am of the opinion that a good direct carrying trade can be done, as one-ninth of all the tea imported into the United States is Ping Suey, every pound of which comes from this district, and that trade forms only one-half of the exports of tea to the United States from Ningpo. Add to this the silks, matting, hats, etc., all of which are shipped via Shanghai, and good homeward cargoes are in sight. At present all imports of flour are received from Shanghai.

In this consular district there are from 25,000,000 to 35,000,000 people, and it is one of the richest and most fertile sections of China. If our merchants took as much trouble to extend their trade in China as they do in some other parts of the world, they would in a few years meet with much better results, financially, than they are now doing. The people are willing and ready to buy, providing the merchandise is cheap and good.

OBSTACLES TO TRADE.

The great obstacle to commerce in China is the administration of the likin and the guilds. These two institutions are the greatest hindrances to trade. Remove the likin and we have an immense market opened to us.

The guilds are societies or boards of trade, and control all business in their respective lines. Without going into details on a subject that has so often been treated in former reports by the consuls in China, I will say that flour, like all foreign exports, if sent into the interior must be covered by a

transit pass, on which another duty, or, as it is called, "likin," has to be paid, although the regular import duty has been paid at the port of entry. Besides, it is subject to frequent examinations and often to delays and annoyances by the likin officers, all of whom are desirous of making as much as possible out of the merchant who deals in foreign goods. It is immaterial whether the flour is owned by a native or a foreigner, the same system prevails, but it is rarely, if ever, that a foreigner accompanies his merchandise into the interior. In fact, it is out of the question for him to do so, as everything is against him—the likin stations, the constructions placed on the treaties by the authorities, etc. This is wrong, and not in accord with the spirit of any treaty.

The guilds are the first block in the path toward an extension of trade. To illustrate: An American imports flour into Ningpo; that American must make terms with the guild controlling foreign merchandise or he will not be able to sell a pound of flour, for every native flour merchant is a member of the guild, and, if the guild sends out an order not to buy the American flour, no merchant will think of disobeying. As the likin office is always in affiliation with the guilds, it is useless to attempt to send the flour into the interior.

The enemies of the foreign merchant in China are the guilds and the likin, as the *literati* are the enemies of the missionary.

At present all import business is completely paralyzed, owing to the condition of silver, and until that metal has reached a more settled state we need look for no extension of our trade in the East. When the money market is once again on a reasonably permanent basis, we may expect an increase in our trade.

I can do no better than to quote from the very able report on the "Trade of China for the Year 1893" (just published) of the statistical secretary of the imperial maritime customs, H. Kopsch, esq., dated March 10, 1894:

> The revenue is the surest indication of decline or development in China's international trade, and the receipts derived from foreign imports afford proof of a portentous diminution, with no commensurate counterbalancing advance from the export trade abroad, as the constant downward tendency of sterling exchange of the Shanghai tael, which dropped during the year from 3*s.* 10⅞*d.* to 3*s.* 2*d.*, quite demoralized all export business.
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> *Foreign trade.*—The division of the import trade in which foreign gold capital is embarked, which should be kept distinct from the equally large Asiatic portion paid for in silver, has been characterized by an unprecedented retrograde movement, which can only be ascribed to the depreciation in the gold value of silver, causing an immense curtailment at their greatly enhanced prices in the demand for textiles, opium, etc. Indeed, if this decline continues, it will completely nullify the advantages expected to accrue from the opening of new ports and great markets, such as Chungking, where the value of foreign merchandise imported has fallen off by over 1,250,000 Haikwan taels* as compared with the figures of 1892. Nor has the depreciation in the gold value of silver stimulated the export trade abroad to the extent anticipated. It would thus appear that to the trade of China the great appreciation of gold has proved ruinous to the import business, and the instability of silver utterly disorganizing to

* The Haikwan (or customs) tael is valued at $0.96 (gold) at Ningpo.

the export trade. * * * Reference to the list of imports from European gold-currency countries discloses an unparalleled falling off in all kinds of textile fabrics.

* * * * * * *

In connection with the decline in the value of China's foreign import trade it may not be out of place to remark that to the observer in the East it seems inexplicable that the gold-currency countries, while striving to extend their trade, should resolutely ignore the fact so clearly demonstrated by the decline in the demand for piece goods that to the millions in China the tael or ounce of silver is still a tael of undiminished purchasing power, whether the sterling value be 6*s.* or 3*s.*, and that so soon as the discredited tael fails to buy the same quantity of foreign goods as heretofore the consumer ceases to be a customer, and will supply his own wants by manufacturing textiles from home-grown materials.

* * * * * * *

A nation whose inexhaustible supply of laborers excites such alarm among western peoples and governments is not likely to prove less formidable when it brings similar forces of cheap silver-paid skilled operatives into competition with the textile industries of the gold wage-earning classes of Europe and America, and the effect will be felt more acutely and cause greater consternation than the presence of Chinese labor abroad whenever it comes into rivalry with the handicrafts of Occidental races.

JOHN FOWLER,
Consul.

NINGPO, *March 26, 1894.*

AMOY.

STANDARD OF LIVING.

The standard of living in this district varies according to race and class. All the Europeans, excepting a few Portuguese, live well, if not luxuriously. This applies to the five communities in this consular district, viz, Amoy, Kelung, Tamsui, Taiwanfoo, and Takao. The Portuguese are more frugal in their habits, and prefer a simple and economical diet. Of the Chinese, the mandarins, merchants, and well to do live well. The tradesmen and clerks live poorly, and the great working classes (90 per cent of the population) live on a few cents a day.

American flour is popular here, and all who can afford it are ready to use it.

QUALITY OF FLOUR USED.

The best quality of wheat flour is most used. Hardly any other is imported. Of other flours in the market the medium qualities are the more popular. This applies to flour made from the following grains, bulbs, etc.: Rice, millet, buckwheat, Japanese wheat, beans, pease, peanuts, barley, potatoes, rhubarb, sweet potatoes, yams, chestnuts, water lotos, corn, arrow-root, caladium, and other varieties of lesser importance.

IMPORTS OF FLOUR AND WHEAT.

Prior to 1893 no other than American wheat flour was imported into this consular district. In that year a quantity of Japanese wheat flour was put upon the market, and found ready sale. It was inferior to the American in

quality, but lower in price, and was put up in more convenient and portable form. The amount imported was less than 100,000 pounds. This year (1894) the importation is much larger, the fall in silver making it all the cheaper in comparison with the American article.

The quantities of American flour imported into the ports of this consular district for the calendar years 1890–'93 (the quantities for 1893 being estimated) were as follows:

Ports.	1890.	1891.	1892.	1893.
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*
Amoy	167,000	3,830,000	3,400,000	3,000,000
Tamsui and Kelung	140,000	1,100,000	1,300,000	1,100,000
Takao and Taiwanfoo	580,500	400,000	540,000	500,000
Total	887,500	5,330,000	5,240,000	4,600,000

The quantities of American wheat imported into this district are insignificant (not amounting to over 500 pounds during the four years), Chinese and Japanese wheat supplying the wants of the people in this respect.

EXCHANGE FACILITIES.

The facilities for monetary exchange at Amoy are excellent, but somewhat involved and peculiar. The general standard is the Spanish dollar (silver). Upon this are kept bank accounts, etc. It is largely theoretical, as an actual Spanish silver dollar is never seen in circulation. The dollar in actual use is the Mexican, which is slightly lower in value than the Spanish. Along with this circulate Japanese yen, American trade dollars, Peruvian dollars, and Chilean dollars, at the same value. The Hongkong and Shanghai Banking Corporation and other banks issue paper money which represents Spanish dollars, but is exchanged for Mexican dollars. The small notes are unpopular because they are so filthy; those from $5 upwards are popular all along the China coast.

In addition to these, British currency and occasionally American are encountered. Both Europeans and natives employ the national system, which uses as its standard a tael (Chinese ounce) of silver. The tael is not coined. In paying a bill in taels and fractions thereof, that weight of the white metal is weighed out. In a large sum there may be horseshoes of silver, ingots, slugs, coins, medals, ticals, and even pieces of jewelry.

In addition to the confusion caused by the simultaneous use of six monetary systems, is the element of exchange. There is first the local exchange on bank notes. A $10 note issued by the Hongkong and Shanghai Bank at either of those places seldom or never brings $10 at Amoy at the counter of that very bank. The local exchange varies from day to day, and runs from 1 to 5 per cent. The exchange between silver and bank notes ranges from one-fourth of one per cent to one per cent; on American currency, from 1 to 10 per cent; on American gold, from 1 to 3 per cent.

Silver is usually sloughed and chopped. The chopping is done with a hammer on a conical anvil. It is a good test of genuineness, but it removes a small amount of metal, and entails a loss of one-half of one per cent to one per cent. Then there is the local exchange between Amoy and Hongkong and Amoy and Shanghai, the two clearing houses of the China coast. Last of all, is the exchange between Hongkong or Shanghai on the one side and San Francisco, New York, London, or Paris on the other. Omitting the banker's commission, this in seven years has been phenomenal. The Mexican dollar has fallen from $1.10 in United States gold to 50 cents. These exchanges militate against the merchant and to a certain extent benefit the banker.

SHIPPING FACILITIES.

The facilities for shipping from this port to the United States and *vice versa* are extremely good; in fact, they could not be better than they are at present, owing to the low rates of freights. Steamers come and go between here and New York. At times, when cargo allows, vessels of the Pacific Mail (which is the best of the transpacific companies), the Canadian Pacific Steamship Company, the Northern Pacific Steamship Company, and the Occidental and Oriental Steamship Company stop at this port. Sailing vessels come here from New York, Philadelphia, San Francisco, Portland (Oregon), Seattle, Tacoma, and Vancouver.

OBSTACLES TO TRADE.

The only obstacle in the way of the extension of trade in American wheat flour is the "likin," or barrier tax, levied all through China. In transporting merchandise into the interior of this great province (Foh Kien) there is a likin office every 5 and 10 miles. They overhaul the goods the same as do customs officials and then levy a small tax upon them. The amount is small, but, when it is multiplied by twenty, thirty, forty, and so on, it finally grows so large as to take away all the profit and render the goods too dear to compete with their natural rivals. For this reason, it may be questioned if American wheat flour has ever reached the interior of this province beyond the 100-mile limit.

TRADE OUTLOOK.

The prospects for doing a more extensive business in American flour are admirable. The sales are increasing steadily; the article is popular and its use does not injure any single native industry.

What is required at present may be stated as follows:

(1) The establishment of agencies at all the treaty ports, and the keeping in stock in some central depot of an amount of flour sufficient to supply any agency that runs short.

(2) Putting by a second or low grade of flour, as well as a first quality. The Chinese masses are poor, so far as amounts of money are concerned, and figure their daily expenses in tenths of a Mexican cent. If a standard

flour is worth 3 cents a pound and an eatable flour 2 cents, ten mandarins and ten private citizens will use the former, while ten mandarins and a thousand private citizens will take the latter.

(3) Putting the flour up in 10 and 20 pound bags, as well as in the 50 pound ones now employed. The Chinese seldom use bread. When they do it is as a curiosity and not a regular article of diet. They like flour for making macaroni, pastry, and *entrées*. They use small quantities at a time.

The climate in south China is hot and moist, and a large bag of flour in a native house will get moldy in a short while. In summer a 10-pound bag and in winter a 20-pound bag would be about the right weight to escape mold and fungus. This is the rule followed by the Japanese here, and it has already proved a great success.

WILLIAM E. S. FALES,
Acting Consul.

AMOY, *April 9, 1894.*

JAPAN.

NAGASAKI.

QUALITY OF FLOUR USED.

American flour is consumed in this district. The quality used is mostly a mixture of Japanese and California and Oregon flour.

IMPORTS OF FLOUR AND WHEAT.

The quantities of American flour imported at Nagasaki during the years ending June 30, 1891, 1892, and 1893, amounted to 8,414,429 pounds, 4,975,075 pounds, and 2,592,655 pounds, respectively. The quantity imported from other countries during those years amounted to 436,575 pounds.

No American wheat was imported during the years under consideration, but 689,049 pounds were imported from other countries.

EXCHANGE AND SHIPPING FACILITIES.

Exchange is effected through the foreign bank agencies here, viz, the Hongkong and Shanghai Banking Corporation, Chartered Bank of India, Australia, and China, National Bank of China (limited), Mercantile Bank of India (limited), the Bank of China, Japan, and the Straits (limited).

Shipping facilities from Portland, San Francisco, and Victoria are good.

W. H. ABERCROMBIE,

NAGASAKI, *March 6, 1894.* *Consul.*

OSAKA AND HIOGO.

STANDARD OF LIVING.

The standard of living among the natives in Japan is very poor. Six-tenths of the population do not earn more than $10 per month. The people like American flour, but only eat bread or use flour when there is a short rice crop.

An inferior quality of flour is used, made from wheat grown in the country. That imported is from California, Oregon, and Washington, shipped in 50-pound bags.

IMPORTS OF FLOUR AND WHEAT.

The importation of American flour into this district for 1891, when there was a short rice crop, amounted to 2,216,160 pounds; in 1892, it amounted to 814,000 pounds; and in 1893, to 800,000 pounds.

No American or any other wheat was imported during the above years, nor was any wheat flour imported from other countries during the same period.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are very good, there being both native and foreign banks.

The facilities for shipping from the United States are ample both by sail and steam.

OBSTACLES TO TRADE.

The only obstacle in the way of the extension of trade in American flour is that the Japanese are, for the most part, too poor to buy it, and prefer rice. The poorer people eat rice and barley boiled together.

There can be only a small yearly increase in the consumption of American flour, probably 100,000 to 200,000 pounds per annum.

E. J. SMITHERS,
Consul.

HIOGO, *January 31, 1894.*

KANAGAWA.

CONSUMPTION OF FLOUR.

The Japanese consume wheat flour in considerable quantities, considering their financial condition and habits of life. It is estimated that the present annual consumption is about 75,000 barrels, of which about one-third is milled here and the balance imported from the United States. Owing to the fact that American wheat and flour are much stronger and better food products than the native articles, the use of imported flour could be largely increased if costs were reduced. At the present time, however, the low rates of exchange have so enhanced the laid-down prices that a temporary check to imports from the United States is being felt. If wheat were not cheap in the United States, the importation of our flour would be practically stopped, and the native mills would correspondingly increase their output.

QUALITY OF FLOUR USED.

The principal brands of American flour used are those classed generally as "Bakers' Extra," the lower grades coming too near in quality to the best Japanese. The proportions are estimated to be about 60 per cent of "Bakers' Extra" to 40 per cent of the lower grades, which latter may again be divided into three descending classes, there being a difference of about 20 cents a barrel, or, it may be said, the lowest "Bakers'" grade is 40 cents in price below the Japanese best low grade.

OBSTACLES TO TRADE.

Mr. W. S. Stone, manager of the American Trading Company, at Yokohama, to whom I am much indebted for information upon this subject, says:

The only obstacle in the way of increasing the consumption of American flour is the matter of cost; but, until this can be materially reduced, there is no great prospect of much larger business than now obtains. The American flour is well and favorably known throughout the Empire, and its use is only restricted by the ability of consumers to pay.

The flour business has been closely watched by this company for many years, and, as large importers, we have had occasion to go pretty thoroughly into the question of supply and demand. For a long time the market was almost entirely supplied from San Francisco, but the frequent and efficient ocean service between the North Pacific ports and this country existing for the past two or three years has enabled Washington and Oregon to successfully bid for a share of the business, while the volume, for the reasons given, has not materially increased.

IMPORTS OF FLOUR AND WHEAT.

The Japanese customs returns are made up for calendar years, and show the following imports:

Whence imported.	1890.		1891.	
	Quantity.	Value.	Quantity.	Value.
Wheat.	*Pounds.*		*Pounds.*	
United States	43,845	$625	1,476	$24
Korea	4,857,826	46,040	3,728,525	38,907
Other countries	882	26	.....	.....
Total	4,902,553	46,691	3,730,001	38,931
Flour.				
United States	8,888,032	179,148	11,952,270	270,655
Other countries	56,940	2,225	113,602	3,348
Total	8,944,972	181,373	12,065,872	274,003

Whence imported.	1892.		1893.	
	Quantity.	Value.	Quantity.	Value.
Wheat.	*Pounds.*		*Pounds.*	
United States	133	$2.84	386	$3.70
Korea	2,851,202	29,732.00	143,710	1,198.00
Other countries	3,601	38.16	6,708	64.30
Total	2,854,936	29,773.00	150,804	1,260.00
Flour.				
United States	10,025,250	191,902.00	11,862,682	199,067.00
Other countries	8,918	6,000.00	158,875	4,197.00
Total	10,034,168	197,902.00	12,021,557	203,264.00

W. W. McIVOR,
Consul-General.

KANAGAWA, *April 30, 1894.*

JAVA.

STANDARD OF LIVING.

The standard of living in this district is high for the Europeans and low for the Javanese and Chinese. The first consume wheat flour and the two latter rice.

The choice of the Europeans is American flour, but, generally speaking, it is damaged before arriving here, and consequently does not sell as well as Australian flour. If in good condition it is preferred, and finds a ready market.

Imports of flour.

From—	1891.	1892.	1893.
	Tons.	*Tons.*	*Tons.*
United States	500	.....	300
Other countries	8,000	8,474	7,700
Total	8,500	8,474	8,000

Wheat is not imported.

EXCHANGE AND SHIPPING FACILITIES.

There are banking houses where exchange can be effected on all countries.

The shipping facilities from Pacific ports are by steamer or sailing vessel via Hongkong; from Atlantic ports, either direct by steamer or sailing vessel or via England per steamer.

OBSTACLES TO TRADE.

The only obstacle in the way of the extension of trade in American flour is the length of time it takes to reach here. Transshipping the flour is likely to damage it more or less, thereby decreasing its value. If shipped direct in small cargoes it would undoubtedly bring a good price.

TRADE OUTLOOK.

There is little prospect of the trade in American flour increasing unless it can be shipped direct, when it would arrive from San Francisco by steamer in four or five weeks. Australian flour is on the market in ten or twelve days after being shipped, and is received in good condition. Flour sells here at $6 and $7 per barrel or sack of 200 pounds.

B. S. RAIRDEN,
Consul.

BATAVIA, *February 20, 1894.*

KOREA.

STANDARD OF LIVING.

The diet of this people is rice (and meat, with vegetables) almost exclusively. Wheat, beans, millet, etc., are used, but in very small quantities as compared with rice. Bread is not used. A heavy kind of unraised cake is common, but not at all popular, because of the indigestion that follows its use. Native flour is very gritty, can not be used by foreigners for bread, and is used by the natives chiefly for making vermicelli, which is used to a considerable extent. Foreign-baked bread is liked well enough, but before the Koreans could make it themselves the plans of their houses would have to be changed and the customs of centuries given up—a thing that is not at all likely to occur.

QUALITY OF FLOUR USED.

The quality of flour most used is native flour of a poor grade.

IMPORTS OF FLOUR AND WHEAT.

The imports of foreign flour during the years 1891, 1892, and 1893 were as follows:

Year.	American.	All other.	Total.
	Pounds.	*Pounds.*	*Pounds.*
1891	89,333	53,333	142,666
1892	98,133	117,067	215,200
1893	116,267	(*)	.....
Total	303,733	170,400	357,866

*Not known.

Only American flour is used by the foreigners resident here.

Wheat was not imported during the years mentioned, but was exported to the following extent: In 1891, 4,181,733 pounds; in 1892, 2,700,733 pounds. The figures for 1893 are not yet available.

DUTIES.

The duty on flour and wheat imported from all countries is 5 per cent ad valorem.

EXCHANGE AND SHIPPING FACILITIES.

The currency is copper cash, which is used in purchasing native products.

Goods from the United States are transshipped at Japanese ports.

TRADE OUTLOOK.

Custom and native prejudice are the chief obstacles to trade. I do not think there is much prospect of increasing the trade in American flour in this country.

H. N. ALLEN,
Secretary of Legation.

SEOUL, *April 20, 1894.*

PHILIPPINE ISLANDS.

CËBU.

STANDARD OF LIVING.

The standard of living in the Cëbu district is not high. The ordinary food of the bulk of the population consists of rice and maize, which are always procurable at moderate prices. These have always been the food of the people, and they do not show any desire to alter their mode of living.

QUALITY OF FLOUR USED.

"Sperry's XXX" flour is practically the only kind sold here.

IMPORTS OF FLOUR AND WHEAT.

Flour is not imported directly into this district, the supply being drawn from Manila. It is estimated that 400 quarter sacks are consumed here monthly, principally in the form of bread, by the European community.

Wheat is not imported at all.

EXCHANGE AND SHIPPING FACILITIES.

The financial arrangements of the district are carried out in Manila by representative agencies here. As stated before, our supplies come through Manila.

OBSTACLES TO TRADE.

The only obstacles to the extension of trade in American flour are the conservatism of the natives and their disinclination to work, which prevents their earning more than sufficient to purchase the cheapest form of food, which is probably maize. In my opinion, therefore, the demand for American flour is likely to be of slow growth.

G. E. A. CADELL,
Consular Agent.

CËBU, *March 8, 1894.*

MANILA.

STANDARD OF LIVING.

The Caucasian element here live very much as they do at home, but the natives and Chinese, who form over 99 per cent of the population, are rice-eaters. There is, however, a large consumption of flour by the European population. The troops and naval forces also use considerable quantities.

The natives, especially those living near the large towns, eat bread made of wheat flour.

IMPORTS OF FLOUR AND WHEAT.

The imports of American flour, imported from China, amounted to 335,000 sacks (quarter barrels) and 329,000 sacks in 1891 and 1892, respectively. The statistics for 1893 are not yet available.

Practically all the flour imported is American flour. Occasionally a sailing vessel leaves San Francisco to load outward at a Philippine port, and it often finds it convenient to take flour in lieu of ballast. Such imports would be credited to the United States, but almost every sack of flour that finds its way to these islands is transshipped at Hongkong into local steamers, and the customs statistics credit the import to China. Some small lots of Japanese and Australian flour also come via Hongkong, but these grades can not compare either in quality or price with California flour.

Wheat is not imported into these islands.

DUTIES.

The duty on quarter-barrel sacks of flour is 56 cents each, including duty on the sack, and on wheat 66 cents per 100 kilograms. The duty is the same on flour from all countries, except that from Spain. Spanish flour pays but 20 cents per barrel and Spanish wheat but 6 cents per 100 kilograms. It was expected that when these differential duties went into force (April 1, 1892) a large demand for Spanish flour would set in. This, however, has not proved to be the case.

EXCHANGE AND SHIPPING FACILITIES.

Flour business is only possible where a bank credit on London is opened by some bank here through some other bank in San Francisco.

There is no direct shipping between these islands, except as before stated.

TRADE OUTLOOK.

If flour were put on the free list here a much larger consumption would doubtless ensue. At present a 50-pound sack sells at wholesale at $2.25, local currency.

C. H. COWAN,
Consul.

MANILA, *February 7, 1894.*

SIAM.

STANDARD OF LIVING.

The Siamese live almost entirely on rice and fish, and flour is practically an unknown quantity to them.

QUALITY OF FLOUR USED.

The quality of flour used in Siam ranges from a "XX" brand, which sells at about $1 per 50-pound sack retail, to a kiln-dried flour in tin cans containing 10 pounds each imported from England, and which sells at about 95 cents per tin. The Sperry and Dayton brands from California are those principally found on the market.

IMPORTS OF FLOUR AND WHEAT.

It is impossible to give the imports of American flour, as the customs returns do not give the country of origin, but credit the product to the country from which it is received. The following statistics are, however, practically correct: American flour imported into Siam during the two calendar years 1891 and 1892 (the statistics for 1893 are not yet available) were 30,370 and 36,514 bags, valued at $29,508 and $36,782, respectively. The flour imported from other countries during the above years did not, in my estimation, amount to over $15,000.

Wheat is not imported into Siam.

DUTIES.

The import duty on wheat and wheat flour is 3 per cent ad valorem. The duty is the same on products from all countries.

EXCHANGE AND SHIPPING FACILITIES.

Exchange is principally carried on through the local branch of the Hongkong and Shanghai Banking Corporation. There are other agencies of minor importance.

The principal portion of goods shipped from the United States comes via Hongkong, where it is transshipped for this port; some, however, comes via Singapore, where it is also transshipped.

TRADE OUTLOOK.

The importation of a greater amount of American flour into Siam depends principally upon the increase in the number of foreigners in the country, who are practically the only consumers. The rice and fish diet fills entirely the wants of the Siamese, and they do not care for, and, in fact, know nothing of, flour.

ROBERT M. BOYD,
Vice-Consul-General.

BANGKOK, *February 2, 1894.*

STRAITS SETTLEMENTS.

STANDARD OF LIVING.

The standard of living in these possessions and throughout Malaisia falls below that of Europe, and far below that of the United States. With all but the Europeans, who are greatly in the minority, the real "staff of life" is rice, to which the natives add fruit, vegetables, and dried fish, the Chinese population supplementing the whole with pork—fresh when obtainable—an article of food forbidden by the Koran to the Mohammedan Malays.

QUALITY OF FLOUR USED.

The quality of flour most used in this colony and its dependencies is the medium grade of California flour, which appears to stand the climate better than the flour produced from wheat grown in the Northwest.

IMPORTS OF WHEAT AND FLOUR.

The amount of American wheat flour imported into the Straits Settlements during the years ending June 30, 1891, 1892, and 1893, was 12,722 tons, 13,805 tons, and 12,748 tons, respectively. No American wheat was imported during these years.

The quantity of wheat flour imported from other countries amounted to 1,104 tons, and of wheat 1,130 tons during the three years.

DUTIES.

In the Straits Settlements and their dependencies there are no duties imposed upon wheat or wheat flour.

EXCHANGE AND SHIPPING FACILITIES.

All facilities for monetary exchange are afforded by the leading banks at Singapore, which are the Hongkong and Shanghai Banking Corporation, the Chartered Bank of India, Australia and China, and the Mercantile Bank of India (limited).

Shipments hither of flour from the United States are made via the Pacific Mail Company's steamers to Hongkong, and thence transshipped to this point.

OBSTACLES TO TRADE.

The only apparent obstacle in the way of the extension of the trade in American flour here is the want of opportunities for direct shipments from San Francisco to Singapore.

TRADE OUTLOOK.

As the European population increases and the natives become more accustomed to the use of wheat flour as an adjunct to their ordinary diet the prospect of doing a more extensive business in the American product will steadily improve throughout these and the adjacent states.

The market is one which, I believe, will prove very valuable to us in the future, possibly in the very near future, and one which we should and can control.

E. SPENCER PRATT,
Consul-General.

SINGAPORE, *March 15, 1894.*

TURKEY IN ASIA.

PALESTINE.

STANDARD OF LIVING.

The standard of living among the natives of Palestine is comparatively low. Their wants are few and their poverty compels them to subsist on the bare necessaries. Vegetables form their chief food. The bulk of the population raise their own flour. When flour has to be purchased they buy the native product, which they can procure in the markets at an average cost of 10 cents per rottle (6 pounds).

The people are ready to eat American flour on one condition, namely, that they can obtain it as cheaply as they can the native flour, which, though inferior in quality, satisfies their wants.

IMPORTS OF FLOUR.

The European and American elements of the population, which number at most 12,000, together with probably 5,000 well-to-do natives, eat bread made from fine grades of flour. This demand is supplied by Russia and Austria. Russia is by far the largest exporter of flour to Palestine. The qualities of the Russian product are No. 1 and No. 0—from middling to finest. It is retailed in the markets at from 20 to 30 cents per rottle.

DUTIES.

The duty on all foreign wheat and flour is 8 per cent ad valorem.

SHIPPING FACILITIES.

The facilities for shipping from the United States to Palestine are very limited. No line of steamers is now making direct connection with our only seaport—Jaffa—which has no harbor, making the loading and unloading of cargoes always difficult and often dangerous.

OBSTACLES TO TRADE.

Two very decided difficulties are in the way of the introduction of American flour—first, the small demand on the part of the people for a better article than they themselves produce, and, secondly, the long distance which the American exporter would have to transport his goods. As facilities now

exist Russia or Austria can control the imports of wheat and flour to this country.

No flour is now imported from the United States, and, with the present means of transportation, no importer can attempt it with any hope of gain.

EDWIN S. WALLACE,
Consul.

JERUSALEM, *February 1, 1894.*

SIVAS.

STANDARD OF LIVING.

The standard of living in this consular district is extremely low. The people are miserably poor. They lead a "hand-to-mouth" existence. Owing to the absence of railroads and of all cheap and rapid means of transportation, and also to the fact that the more they produce the more grinding are the tax collectors, there is little inducement for the people to raise more wheat than they require for their own present needs.

QUALITY OF FLOUR USED.

Probably 75 to 80 per cent of the flour used here is wheat ground whole, uncleaned, and not sifted. The wheat is thrashed on the ground by means of a drag drawn over it by oxen, and consequently contains a considerable quantity of dirt and small stones. The common people prefer the whole wheat flour made from this mixture because it has more taste, and they can feel that they are eating something. They do not understand manipulating the finer grades of flour, which are used almost entirely by the bakers, who make bread and cakes for the richer people in the cities.

It would probably take some years to educate the common people up to the standard of American flour. The average price of the flour most used here is about one-third the price of low-grade American flour. It is made from a mixture of various grades of spring and winter wheat.

Within recent years mills with machinery have been introduced for making the fine flour. It is made in three grades of fineness. The average prices are about $1.20 per barrel for the lowest grade, $1.30 for the medium, and $1.50 for the finest. The two lower grades are those most used.

Last year the crops were very poor, and the present prices are about three times the average price—$3, $4, $5, and $6.

IMPORTS OF FLOUR AND WHEAT.

I think no American flour or wheat has been imported into any part of this consular district during the last three years. Occasionally, when there is a failure of the crops in the interior and the charges for transportation are high, a small amount of Russian flour is imported at Samsoun. I do not know the quantity. It varies with the temporary demand, and does not occur unless the price of native flour reaches about $3.70 per barrel.

EXCHANGE AND SHIPPING FACILITIES.

There are no public banks in the interior and no established facilities for monetary exchange.

There is no direct communication with the United States. There is a steamship service from Marseilles and Havre to Samsoun and Trebizonde, whose harbors are poor, with no docks.

TRADE OUTLOOK.

The poverty and ignorance of the people, the fact that under proper conditions this country raises sufficient wheat for its needs, the absence of railroads, and the absence of products to take in exchange are obstacles to the extension of trade in American flour in this part of Turkey, and, in my opinion, the prospects for the extension of trade in American flour here are very poor.

M. A. JEWETT,
Consul.

SIVAS, *January 20, 1894.*

SYRIA.

STANDARD OF LIVING.

Cereals form the standard articles of food in Syria, the soil of all this region being very fertile and abundantly productive of grains, especially wheat. The standard articles of food among the city residents are wheat flour and rice, and among the country people, or "fellaheen," barley and maize flour, lentils, "bourgul" (crushed wheat), and beans.

These constitute the main elements of daily food, and the special object of the majority of Syrians being to obtain and use the cheapest kind of flour, there is every reason to believe that they would be willing and ready to eat American flour if it could be put down in this market at a price to compete with the native wheat, barley, or maize flour.

QUALITY OF FLOUR USED.

Wheat flour of middling grade is the quality most used in Syria, owing to the fact that meat and vegetables are only secondary articles of diet among the middle and lower classes of society. Wheat flour constitutes, in consequence, the main food substance throughout this land.

IMPORTS OF FLOUR AND WHEAT.

No American wheat or wheat flour was imported into this district during the years under consideration, except such small quantities as were brought by American missionaries for their own use.

In the absence of any official statistical bureau in Beirut or of any custom-house records open to inspection, it is impossible to correctly report the quantity of wheat flour imported from other countries, but the following

figures will give an approximate estimate of the quantity of wheat flour imported from the rich grain-growing section of the Hauran and other inland districts by way of Damascus, and also from foreign ports:

Year.	From—	
	Hauran.	Adalia.
	Pounds.	*Pounds.*
1891	18,887,000	700,000
1892	25,473,000	1,600,000
1893	21,086,000	1,300,000
Total	65,446,000	3,600,000

In this connection it is well to understand that the city of Damascus, which is about 51 English miles from Beirut, and in this consular district, is the great granary market for all the wheat produced in the province of the Hauran, where the soil is so fertile that it easily produces from fifty to one hundred fold in crops, and where only a small portion of the immense wheat territory is planted. This country is now being opened up by railroads, and the present production and future promise of this vast and rich territory stand as a barrier against outside or foreign products. This native wheat is ground in Damascus and brought to Beirut in the wagons of the French Diligence Company and also on the backs of camels, mules, and donkeys.

The quantity of wheat imported from other countries in the three years past may be estimated approximately as follows:

From—	1891.	1892.	1893.
	Pounds.	*Pounds.*	*Pounds.*
Hauran and Damascus	120,000	800,000	600,000
Anatolia and Syrian coast ports	16,768,000	15,662,000	13,739,000
Total	16,888,000	16,462,000	14,339,000

DUTIES.

The import duty on American wheat and wheat flour, as well as on wheat and wheat flour imported from other foreign countries into Syria is 8 per cent ad valorem, while the wheat and wheat flour imported from a Turkish district is subjected to no customs duty whatever.

EXCHANGE AND SHIPPING FACILITIES.

The best and safest facilities for monetary exchange in this market are furnished by the Imperial Ottoman Bank, and the usual method is by purchase of checks or sight drafts, payable at various terms, on its branch in London. These drafts can be easily negotiated anywhere in the United States. There are also other banks of good standing and high reputation through which exchanges can be made with nearly as much security and equal facility as with the Imperial Ottoman Bank.

The Faber line of steamers via Havre and Marseilles, as well as the Messageries Maritimes de France and the English Knott's Prince steamers via London and Liverpool secure advantageous shipping facilities from the United States to Syria.

OBSTACLES TO TRADE.

The chief obstacles in the way of the extension of trade in American flour in this section of the Turkish Empire consist, first, in the production of this article in the country itself considerably beyond the consumption of the Syrian people, and, secondly, in the absence of a direct line of steamers from the United States to the coast of Syria, the consequence being that freight and insurance run up to a figure which almost excludes the possibility of competing with the other countries which supply this market with the foreign wheat flour used by the inhabitants. The reason why the quantity of foreign flour consumed here is so small lies in the fact that the Syrians are generally satisfied with the cheap native flour, and that only the European and American colonists use the dearer foreign flour for pastry and special cooking purposes.

TRADE OUTLOOK.

The prospects for doing a more extensive business in American flour are, for the present at least, not very promising; but they may and will improve with increasing immigration of Europeans and Americans into this country, as well as from the increasing tendency shown by well-to-do natives to adopt the delicacies of the American and French cuisine.

THOMAS R. GIBSON,
Consul.

BEIRUT, *February 24, 1893.*

ALGERIA.

STANDARD OF LIVING.

The standard of living in this consular district is both high and low—high in the cities, where the population is mostly European, and very low in the interior, where the native element predominates.

In Algiers the conditions of living are exceedingly costly. In the cities and towns the best quality of bread is eaten, and the finest brand of flour required. In the interior the natives feed on flour of roasted barley, mixed with a little water ("rouina"), or are contented with a sort of pancake not over half an inch thick made of grain roughly ground between two stones.

IMPORTS OF FLOUR AND WHEAT.

No American flour has been imported into Algeria during the years 1891–'93, and, in fact, it is unknown in this district. The imports from other countries, chiefly from France (Marseilles), in 1891, 1892, and 1893 were:

	Kilograms.
1891	5,263,000
1892	13,049,200
1893	15,095,900

The imports of wheat were:

Year.	United States.	Other countries.
	Kilograms.	*Kilograms.*
1891	.....	12,919,600
1892	.....	5,362,900
1893	5,634,100	9,815,100

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange are good, the Banque de l'Algérie, the Crédit Foncier et Agricole d'Algérie, the Crédit Lyonnais, the Crédit Algérien, and the Compagnie Algérienne having branch offices throughout the country and numerous correspondents abroad. American business transactions are, as a rule, carried on through Paris and London, the rate of exchange being slightly higher when drawn on the United States than on Europe.

Shipping facilities with the United States are not good, owing to the lack of direct communication. Except the steamers of the Hamburg Packet Company and North German Lloyd, which call at Algiers twice a month

from November to May, no regular steamship lines ply between the American and Algerian ports. Goods to or from the United States are generally shipped in transit via Marseilles, Havre, Liverpool, London, Antwerp, or Hamburg.

OBSTACLES TO TRADE.

The lack of direct and regular communication has always been, and still is, the greatest obstacle in the way of the extension of trade between the two countries. The expenses of transshipment greatly increase the cost of freight and put the American products at a disadvantage.

Another obstacle of minor importance, but nevertheless worthy of being taken into consideration at present, is the state of the financial market. In most of the eastern wheat-producing countries the rate of exchange is greatly in favor of France, and to a certain extent counterbalances the protective import duty imposed on the staple. Under such circumstances French and Algerian importers are inclined to draw their supplies from those markets rather than from the United States, where the rate of exchange is against them.

TRADE OUTLOOK.

It is not likely, in my opinion, that Algeria will ever become a large market for American wheat and flour. The colony is almost self-supporting in that respect and only requires the foreign products when, for some reason or other, the local crop has failed.

CHAS. T. GRELLET,
Consul.

ALGIERS, *May 8, 1894.*

EGYPT.

Egypt is a country offering little scope for the extension of trade in American wheat flour. Egypt is a purely agricultural country, and not only produces wheat and other cereals sufficient for its population of 7,000,000 or 8,000,000, but sends to Europe each year its surplus of breadstuffs, aggregating in value from $1,500,000 to $2,000,000.

The customs returns disclose only exports of wheat flour; but, were grain or any other standard article brought into the country, it would ordinarily pay a duty of 8 per cent on the market value, the same as flour. The import law of Egypt permits the entry of prime necessaries at a reduced rate, or even free of duty; but this arrangement could only operate in the event of famine.

Should shipments of flour be made from the United States to Egyptian ports they would necessarily be in chartered vessels, as there is no direct line of communication between the two countries. Monetary exchange would be accomplished through the medium of London or Paris banking houses.

FREDERIC C. PENFIELD,
Agent and Consul-General.

CAIRO, *January 11, 1894.*

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MADAGASCAR.

STANDARD OF LIVING.

The standard of living among the native tribes is most primitive, consisting usually of about 1½ to 2 pounds of rice per adult per diem. To this is added about 2 cents' worth of beef and such greens as pumpkin vine and various kinds of weeds and lentils, of which a stew is made and eaten twice a day. Among the colonials and foreigners the standard of living is the same as in most English and French colonies. All foreigners use wheat flour more or less; the natives but very little. With the latter, however, the price is the main consideration. They are ready and willing to eat anything that is cheap and nutritious.

QUALITY OF FLOUR USED.

The quality of flour used here is very poor indeed, being Bombay flour mainly, with some Australian. Sometimes the two are sold mixed. The result is a musty and dirty looking bread.

IMPORTS OF FLOUR AND WHEAT.

The values of flour importations at this port for the years specified were:

Description.	1891.	1892.	1893.
Bombay	$3,000	$2,850	$3,400
Australian	300	340	584
American	80	80	250
Total	3,380	3,270	4,234

There never has been any importation of wheat from any country into Madagascar, as far as I can ascertain.

DUTIES.

The duty on wheat or wheat flour, regardless of origin, is 10 per cent on the cost price in the country of purchase. This duty is assessed upon the first cost, freight and other charges not being considered as a part of said cost.

EXCHANGE FACILITIES.

The facilities for monetary exchange have lately been curtailed by the liquidation and closing of the New Oriental Bank, a branch of the New Oriental Banking Corporation of London. The entire burden of commercial exchange now rests upon the local branches of the Comptoir National d'Escompte de Paris. This institution is said to have a capital of $16,000,-

000. The local branch here quotes exchange as follows: They will sell sight drafts on Paris, London, and New York (the United States generally) at $2\frac{1}{4}$, $2\frac{3}{8}$, and $2\frac{5}{10}$ per cent premium, and time drafts on the same places for the same premium, less one-half of one per cent for each month of the life of the drafts. They will buy sight drafts on Paris, London, and New York at two-thirds of one per cent discount, and time drafts at the same discount, plus the same discount for each month of the life of the draft.

SHIPPING FACILITIES.

Shipping facilities are gradually growing better. There are now three main steam routes, viz:

(1) New York to Liverpool, via Cunard or White Star lines; Liverpool to Cape Town, via Shaw & Saville line; Cape Town to Tamatave, via Castle line, every 4 weeks.

(2) New York to Cape Town, via Norton & Son's South African line; Cape Town to Tamatave, via Castle line, every 4 weeks.

(3) New York to the Mediterranean, via Marseilles and Brindisi, thence to Tamatave, via Massageries (or Suez) Maritimes line, monthly.

OBSTACLES TO TRADE.

The only obstacles to an extension of the American flour trade are lack of enterprise; French and English competition, the latter especially; and, lastly, but by no means least, the absolute indifference of the only American commercial houses here to any imports from the United States but cottons, called grays, sheetings, shirtings, and a few drills, and some kerosene oil.

TRADE OUTLOOK.

Bombay flour retails here at about $6 per barrel and Australian at $7 to $9 per barrel. Put American flour of good quality in this market at a figure that will enable retailers to cut those prices and it will capture the trade.

English and French colonial houses give 90 days credit to responsible parties—a great consideration to small dealers—while American terms are short time or cash.

I would add that the consumption of flour among the natives at Antananarivo is very much larger than at Tamatave. There is also a large European community at that place, but goods must be conveyed thither (260 miles) on men's shoulders, over a rugged country. Small packets or packages are essential for such mode of conveyance, namely half sacks and quarter barrels.*

EDW. TELFAIR WETTER,
Consul.

TAMATAVE, *April 1, 1894.*

* See "Packing Goods for Export," No. 160, pp. 208–210.

MOZAMBIQUE.

STANDARD OF LIVING.

The standard of living in Mozambique is not high. The great majority of the inhabitants are satisfied if they can procure the necessaries of life without any of its luxuries. The quantity of bread consumed is small, and pastry is rarely seen except in the houses of foreigners.

QUALITY OF FLOUR USED.

The greater part of the flour consumed here comes from Bombay in 200-pound sacks. It is of fairly good quality, somewhat resembling what is called in the United States St. Louis flour, and retails for about $6 per sack. Small quantities are also imported from Austria, France, and Germany, generally for the use of the importers, though occasionally very small lots are sold.

The people are probably ready to eat American flour; but, as the first consideration with them is cheapness, the American flour will have to be sold at prices which will favorably compare with those of the Bombay article.

IMPORTS OF FLOUR AND WHEAT.

No American flour, to my knowledge, has ever been imported here. A few years ago Australian flour was imported to a considerable extent, but the quantity received now is very small.

The total quantity of flour imported into the port of Mozambique from all countries during the past few years may, in the absence of official figures, be safely stated to have been 100 tons per annum. The reason why the import of flour is so small is that rice is the "staff of life" in Mozambique. Rice is cheaper than flour, and probably 80 per cent of the inhabitants live upon it almost exclusively.

Wheat is not imported.

As long as Australia and India produce wheat and furnish a fairly good flour at a low rate, and can secure low freight rates to this coast, they will probably be the principal competitors for the flour trade of east and southeast Africa. The United States are too far away. Given flour at a lower price in the United States than in India, the American product would have to come to Lorenzo Marquez in a sailing vessel, and from there be transshipped to the different coast ports by steamer, or it would go to Cape ports by steamer from New York and be forwarded on to its final destination by an east coast steamer. In either case, by the time it reaches the final port of delivery the charges for freight, transfers, lightering, etc., will have run up to nearly $20 per ton. On the other hand, a "cutch," or Maskat dhow, will bring flour from India for a few dollars per ton.

EXCHANGE AND SHIPPING FACILITIES.

There is but one English bank in this province, and that is situated in Lorenzo Marquez, where it offers excellent facilities for exchange. There are several branches of a Lisbon bank located in the principal ports of the colony, but their rates of exchange are so high that beyond Lisbon dealing with them is out of the question.

TRADE OUTLOOK.

It can not be said that there is much prospect of doing an extensive business in American flour in this province. In the first place there is the price and the cost of transportation to be considered, and, in the second place, there is the small annual consumption—100 tons here, a like quantity in Quilimane, and, perhaps, a little more in Lorenzo Marquez and Beira.

DUTIES.

The duty on flour and wheat from all countries is one cent per pound.

W. STANLEY HOLLIS,
Consul.

MOZAMBIQUE, *March 9, 1894.*

ST. HELENA.

Rice is the important article of food in St. Helena, although flour is used by those who can afford it. The quality most used is the "Household" or "Family" brand.

The imports of flour into St. Helena during the years ending June 30, 1891–'93, were as follows.

Year.	American.		Australian.	
	Quantity.	Value.	Quantity.	Value.
	Barrels.		*Sacks.*	
1891	316	$2,415	2,153	$13,335
1892	380	2,735	1,680	11,350
1893	978	6,275	2,574	13,805
Total	1,674	11,425	6,407	38,490

There are no wheat imports into this island.

H. CHRISTIAN BORSTEL,
Consul.

ST. HELENA, *January 23, 1894.*

SIERRA LEONE.

STANDARD OF LIVING.

The standard of living is not high. The people, however, are becoming used to American flour. The best quality of flour is used when it can be obtained.

IMPORTS OF AMERICAN FLOUR.

The imports of American flour during the years ending June 30, 1891, 1892, and 1893, were 6,528, 7,200, and 11,500 barrels, respectively. No wheat flour is imported from any other country than the United States.

Wheat "cracked" or "crushed" only is used, and in limited quantities. Whatever is used is American.

DUTIES.

Import duties are 7½ per cent ad valorem, except on articles specially exempted, and "specific."

EXCHANGE AND SHIPPING FACILITIES.

There is one banking house here—recently opened. Exchange on the United States can be obtained at 4 per cent in English gold, or $4.80 for $5 in American gold. The English pound sterling in this colony is $4.80 in American gold dollars.

Direct shipping is by sailing vessels from New York and Boston and indirect by steamer via Liverpool.

TRADE OUTLOOK.

There are no obstacles in the way of extending trade in American flour here. In my opinion the prospect is good for doing a more extensive business, not only in flour, but in all other American food stuffs, if properly introduced and sold at reasonable prices.

BOLDING BOWSER,
Consul.

SIERRA LEONE, *January 17, 1894.*

SOUTH AFRICA.

STANDARD OF LIVING.

It is impossible to gauge the standard of living in this consular district, which is very large, comprising four states, viz, Cape Colony, Natal, Orange Free State, and the South African Republic—the population being composed of several distinct races, viz, white, Malay, negroes, Hottentots, etc. So far as the white and most of the Malay population is concerned, I should say the standard of living is well up with the best American communities, and the people are ready to eat American flour because it is the best.

QUALITY OF FLOUR USED.

The quality of flour most used depends upon the nationality of the particular section using it; a fair average would be a medium grade.

IMPORTS OF FLOUR AND WHEAT.

I am unable to obtain statistics for fiscal years, but the following statement shows the imports of flour and wheat into Cape Colony for the calendar years 1891–'93:

Whence imported.	1891.	1892.	1893.
Wheat flour.	*Pounds.*	*Pounds.*	*Pounds.*
United States	1,120,360	.....	4,455,847
All other countries	52,854,404	33,795,469	29,205,016
Total	53,974,764	33,795,469	33,660,863
Wheat.			
United States	3,708,853	2,257,894	4,495,467
All other countries	101,360	5,580	197,008
Total	3,810,213	2,262,874	4,692,475

Most of the imports into the Orange Free State pass through the ports of Cape Colony, and are, doubtless, included in the foregoing figures, there being a customs union in vogue here; but I give herewith the statistics furnished by our agent, Mr. Landgraf, showing the imports of flour into that country for the years under consideration, viz: In 1891, 587,520 pounds; in 1892, 583,499 pounds; and in 1893, 422,219 pounds. No record is kept of the country of origin.

DUTIES.

The duties on flour and wheat—the same on the products of all countries—are as follows: Wheat, 2*s.* per 100 pounds; wheat flour, 5*s.* ($1.21) per 100 pounds.

EXCHANGE AND SHIPPING FACILITIES.

The facilities for monetary exchange with all the states in this district are excellent in every way.

Shipments can be made by sailing vessels or by a direct line of steamships from New York. Goods for the interior are landed at Cape Town, Port Elizabeth, East London, or Natal, and transported thence by rail to destination.

OBSTACLES TO TRADE.

There are no obstacles in the way of extending the trade in American flour here.

TRADE OUTLOOK.

The prospects for doing a more extensive trade in parts of South Africa are excellent. The country is growing rapidly. Mining interests are being rapidly and profitably developed, thus furnishing a large community of consumers.

Besides this, South Africa has large quantities of wool for export, and our tariff on wool once removed, larger numbers of vessels must soon be employed in carrying the crop to the United States, and these vessels in turn should furnish cheaper water rates for our flour to this section.

Mr. Landgraf, consular agent at Bloemfontein, also thinks that the prospects are good for building up trade in the Orange Free State, provided we can meet the selling price of Australian flour in that market, which is from $4.20 to $5 per 100 pounds.

All things considered, I believe that it would well repay our shippers of wheat and flour to make a strong bid for this market.

C. H. BENEDICT,
Consul.

CAPE TOWN, *March 12, 1894.*

ZANZIBAR.

STANDARD OF LIVING.

Zanzibar being inhabited by people of different nationalities, religions, customs, etc., no one standard of living can apply thereto. The native Swahili population has one standard, and the Arabs, Hindus, Banyans, Parsees, and white populations have each a different standard. The Swahilis do not eat wheat flour—they eat flour made from the root of the muhogo, and also maize and corn. The other eastern nationalities use wheat flour, but the quantity consumed is very small in proportion to the population, rice being the staple article of food. The people would be ready to eat American flour could they obtain it as cheaply as flour imported from India and Europe.

QUALITY OF FLOUR USED.

The grades of flour consumed are chiefly of medium and cheap qualities.

IMPORTS OF FLOUR AND WHEAT.

No flour is imported from the United States. No record of imports and exports was kept previous to 1892. In 1892 there were imported from Bombay 13,950 bags and 2,000 barrels from Europe; in 1893, 10,592 bags from Bombay and 1,857 barrels from Europe.

The record of wheat has been kept under the general heading of "grain." It is estimated that 2,500 bags came from Bombay in 1892, and about the same amount in 1893.

No duty is charged on flour and wheat.

EXCHANGE AND SHIPPING FACILITIES.

Monetary facilities are of the best with European countries, India, and Arabia. American business is done through London.

Four or five sailing vessels arrive each year from the United States. Shipments can be made by steamer to Aden, there transshipping for Zanzibar; or to Cape Town, and there transshipping for Zanzibar; or via Marseilles, Hamburg, or London.

OBSTACLES TO TRADE.

The price at which flour would have to be sold to cover expenses and realize any profit is the greatest obstacle to American trade, and the prospects for the extension of the trade in American flour are not good, owing to the cheap supplies from other countries.

J. W. ALLEN,
Acting Consul.

ZANZIBAR, *March 27, 1894.*

AUSTRALASIA.

NEW SOUTH WALES.

NEWCASTLE.

STANDARD OF LIVING.

The standard of living in New South Wales is high. The average annual consumption of wheat per capita is 6½ bushels. The total consumption of wheat in the colony in 1893 was 7,125,000 bushels, exclusive of seed wheat. Of this total, the harvest of the colony supplied 6,150,000 bushels and the balance was imported from the neighboring colonies, principally from Victoria. The imports from Victoria in 1892 amounted to 700,382 bushels, valued at $701,613.

The quantities of the principal articles of diet annually required by each inhabitant of this colony are estimated, in pounds avoirdupois, as follows: Flour, 270; rice, 11.8; oatmeal, 4.2; beef, 176.8; mutton, 104.8; pork, 9.5; potatoes, 206.5; sugar, 93.5; butter, 16.7; cheese, 5.2; tea, 7.2; coffee, 11.5.

QUALITY OF FLOUR USED.

High grade flours are used, and the best qualities come from the adjacent colonies, chiefly from the colony of Victoria.

IMPORTS OF FLOUR AND WHEAT.

The imports of flour and wheat into New Zealand (all from the adjacent colonies save the small lots from the United States) were:

Year.	Flour.		Wheat.	
	From United States.	From other countries.	From United States.	From other countries.
	Cwts.	*Cwts.*	*Bushels.*	*Bushels.*
1892	3,840	1,275,980	13,985	886,094
1892	1,280	974,960	.....	928,882
1893	600	535,680	.....	471,768

TRADE OUTLOOK.

Whatever wheat and flour may be required in New South Wales, in addition to its home product, can be more advantageously supplied by the neighboring colonies than by the United States; hence there are no prospects for any business in American flour in this colony.

STEWART KEIGHTLEY,
Vice-Commercial Agent.

NEWCASTLE, *March 17, 1894.*

SYDNEY.

STANDARD OF LIVING.

The standard of living in this district is high. The cost of food and beverages other than intoxicants for the year 1893, according to Mr. Coghlan, Government statistician, was £17,228,300 ($83,832,908) for the 1,212,230 people, or $69.15 per capita.

The cost per capita in the principal countries is given as follows: United Kingdom, $71.18; France, $61.10; Belgium, $60.72; Germany, $54.60; Holland, $52; United States, $49.38; Austria, $39.40; Italy, $35.20; and Russia, $26. This indicates the plane of living in New South Wales, and, when we consider that 42 per cent of the total food cost is for bread and meat, the former being as cheap here as in any other country and the latter much cheaper, it tells more strongly in favor of this colony.

The annual consumption for each person is, according to Mr. Coghlan, as follows:

Articles.	Quantity.	Articles.	Quantity.
	Pounds.		*Pounds.*
Wheat flour	270	Potatoes	206.5
Rice	11.8	Sugar	93.5
Oatmeal	4.2	Butter	16.7
Meat:		Cheese	5.2
Beef	176.8	Tea	7.8
Mutton	104.8	Coffee	11.5
Pork	9.5		

The table is extraordinary in the quantities of meats, sugar, and tea, and, on the whole, probably shows an average higher rate of living than that of any other people. This, it would seem, is sufficient answer to the second part of the first interrogatory—the people are "ready to eat American flour" if price and quality are satisfactory.

QUALITY OF FLOUR USED.

Usually the best quality of wheat flour is used. The uniformity is noticeable. The bread for the richest is of the same material and usually of the same make as the bread of the penny soup house.

IMPORTS OF FLOUR AND WHEAT.

I find by Mr. Coghlan's calculations, which are official, that the United States furnished a very small part of the total imports of flour during the calendar years 1891–'93, but we were the only really "foreign" country from which any was imported, the deficiency coming chiefly from Victoria and South Australia.

The details of these imports are as follows:

Whence imported—	1891.	1892.	1893.
Flour.	*Cwts.*	*Cwts.*	*Cwts.*
United States	3,840	1,280	600
Victoria	690,920	618,560	(*)
South Australia	551,680	311,520	(*)
New Zealand	32,620	32,620	(*)
Queensland	760	2,280	(*)
Total flour	1,279,820	†976,140	536,280
Wheat.	*Bushels.*	*Bushels.*	*Bushels.*
United States	13,985	2,520	.....
Neighboring colonies	872,089	928,892	471,768
Total wheat	886,074	931,412	471,768

*Not available. †The details fall short (9,880 cwts.) of making up the total.

EXCHANGE AND SHIPPING FACILITIES.

Exchange facilities are as convenient as in any country.

There are two steamship lines making monthly trips from the Pacific coast—one from San Francisco and the other from Vancouver—which furnish convenient transportation. Sailing ships of good class are always ready to receive charter. Freights are ruling low.

OBSTACLES TO TRADE.

The obstacles to trade can be more clearly answered by a brief review of the wheat industry of this country.

While Australia can not be regarded as a great wheat country, as the average yield is below the average of the wheat-producing countries of the world, yet, as the average of New South Wales is 13.2 bushels per acre, against 11.7 bushels for the United States, it promises to take a leading place in this industry when fully developed. The quality of the wheat produced is good, and its production has increased steadily as follows:

Year.	Area.	Yield.
	Acres.	*Bushels.*
1863	108,133	1,054,954
1873	177,555	2,898,463
1883	247,360	4,042,395
1893	452,921	6,817,457

While this shows an important growth in the production of wheat, the increase has not materially gained on the population, so, relatively, production and consumption has changed but little in the four decades.

Mr. Coghlan tells us that the 1,212,230 people of New South Wales consumed, exclusive of seed, 6.5 bushels per capita, or a total of 7,879,495 bushels, and that the crop of 1893, as above shown, was 6,817,457 bushels, leaving a deficiency of 1,062,038, exclusive of seed, to be made up by

importations. If we assume that the acreage this year is 500,000 acres, an increase of nearly 50,000 acres, and allow 1½ bushels per acre, or 750,000 bushels for seed, it would raise the deficiency to 1,812,038 of wheat or its equivalent in flour.

From what source this deficiency will be drawn depends largely upon the competitive power of the exporting countries.

I have no reliable statistics from the other colonies later than 1891, but find that in that year three of the "sister colonies" had an available surplus of 14,513,000 bushels, to wit:

	Bushels.
Victoria	3,804,000
South Australia	7,900,000
New Zealand	2,809,000

This, after supplying the whole deficiency of Australasia, gave a clear surplus of 9,445,000 bushels to be thrown on the markets of the world.

I do not know whether the production of wheat has increased in those colonies, but the surplus must be equal to several times the deficiency of New South Wales.

These countries lie close to this colony, South Australia joining on the west and Victoria on the south. Thus it will be seen that the wheat-raisers of Victoria and South Australia have an advantage of the wheat-raisers in the United States by at least 7,000 miles in transportation, as the average overland haul in the United States is longer to tide water than the overland haul from these colonies to New South Wales.

While wheat can be produced at a lower cost in the United States than in Australia, I doubt if the difference in the cost of production will equal the difference in the cost of transportation. At present I am of opinion that wheat could be shipped from Puget Sound or the Columbia for 18*s.* or 20*s.* per ton and from San Francisco for 16*s.* per ton. This would be from 12 to 15 cents per bushel, an obstacle too great to be overcome.

Wheat is now worth 64 cents per bushel and flour $1.66 per 100 pounds in Sydney.

With flour, the case does not materially vary. The mills in Australia are of modern make, are numerous, and equal to more than the present demand, so I see no hope for increasing our trade in these commodities in this country. There are seventy flour mills in New South Wales, with a total daily capacity of 620 tons.

One point further: There are very strong probabilities that the near future will see the colonies either federated or with a customs union, and this will place our people at a further disadvantage in these markets.

GEO. W. BELL,
Consul.

SYDNEY, *April 10, 1894.*

NEW ZEALAND.

STANDARD OF LIVING.

The standard of living in New Zealand is high as compared with that of many other countries. This is largely due to the salubrity of the climate and the productiveness of the soil. All kinds of cereals grow in abundance; in fact, the Australian colonies have, to a great extent, to depend on New Zealand for a considerable proportion of their breadstuffs, especially when they have, as is often the case, indifferent harvests. The productiveness of the soil is such as to make the standard of living very high in quality and to cheapen the cost. This is particularly noticeable when the small amount of real poverty prevailing here in proportion to population is compared with that which obtains in other countries. Meat is cheap because of the sparseness of population and the large areas of land used only for grazing purposes. The soil being rich and the climate very mild, the people are not exposed to extremes of heat and cold, a condition which largely contributes to the happiness of their daily existence.

The following rates of wages paid here to those engaged in the various occupations enumerated may be taken as a good indication of the comparative comforts enjoyed by labor when we take into consideration the cheapness of agricultural produce and also that eight hours (except in the case of farm laborers, house servants, and agriculturists generally) constitute a day's work throughout New Zealand:

Occupation.	Per day, without board.	Occupation.	Per day, without board.
Agriculturists:		Artisans—Continued.	
Farm laborers (per week, with board, $6)	$1.46	Shipwrights	$2.80
Plowmen (per week, with board, $7)	1.82	Plumbers	2.80
Reapers (per acre,* with board, $1.50)	2.50	Painters	2.20
Artisans:		Saddlers	2.18
Masons	2.50	Shoemakers	2.19
Plasterers	2.50	Coopers	2.06
Bricklayers	2.67	Watchmakers	2.90
Carpenters	2.50	General laborers	1.70
Smiths	2.40	Miners	2.06
Wheelwrights	2.40	Seamen	†31.62

*Contract price. †Per month, with board.

Food prices.

Wheat	per bushel of 60 pounds...	$0.54
Barley	per bushel of 47 pounds...	.73
Oats	per bushel of 40 pounds...	.54
Maize	per bushel of 56 pounds...	.54
Bran	per bushel of 20 pounds...	.24
Flour	per bag of 50 pounds...	1.03
Do	per ton of 2,000 pounds...	$48.65 to 50.00

Bread	per 4-pound loaf...	$0.12 to $0.14
Beef	per pound...	.06 to .11
Mutton	do.....	.04 to .10
Pork	do.....	.09 to .12
Lamb	do.....	.10 to .12

IMPORTS OF FLOUR.

About twenty years ago there was quite a trade in American flour, but now there is not a pound of flour imported from any country for consumption here. This, of course, is in consequence of the abundance and good quality of the domestic article.

DUTIES.

There is a duty of 18 cents on each 100 pounds of unmanufactured grain and pulse of every kind and 24 cents on each 100 pounds of manufactured grain, such as flour, etc., imported from abroad. There is no discrimination made in favor of any country in the matter of duty on wheat or flour at present, but there is a strong effort being made just now to create a feeling favorable to intercolonial free trade. This sentiment, although it has found able champions in many of the colonies, has not as yet assumed any definite shape, nor is it likely to do so until the federation of the several colonies of Australia is an accomplished fact.

SHIPPING FACILITIES.

The facilities for shipping from ports in the United States to New Zealand are generally favorable. Throughout last year an average of one sailing vessel a month arrived in New Zealand waters from New York, and a steamer every four weeks from San Francisco. It will be seen by the number of vessels engaged in the freight and passenger trade between this country and ports in the United States that the shipping facilities are ample at present. I regret to say, however, that there are more vessels thus far this year in the American-New Zealand trade than can find profitable employment. There are few passengers traveling between the colonies and the United States. The falling off in this respect is, of course, largely attributable to, if it is not altogether caused by, the financial crisis which has affected and is still affecting the Australian colonies—New Zealand alone excepted. There is still a good trade between New Zealand and the United States, but since flax and kauri gum, which constitute the principal articles of export to the United States have fallen, not only in price, but in demand, it is very difficult to find return cargoes for vessels engaged in this trade. Nor is there any chance for improvement in the situation until business generally assumes a more satisfactory aspect in the United States.

While on the subject of shipping facilities, it may be proper to note here that it is more than probable the present mail service, which is performed by an American line, may be withdrawn at the expiration of the existing con-

tract with the New Zealand Government, which terminates in November next. The colonies generally are disposed to favor the Vancouver route, partly from patriotic motives, but largely in consequence of the indifference manifested by our people as to the fate of that long-struggling enterprise, the San Francisco line. That the San Francisco route is the shorter of the two, and necessarily the most popular, goes without saying, but even these natural advantages will not save it unless greater monetary assistance is forthcoming soon.

The Canadian Government subsidizes the Vancouver route to the extent of £25,000 annually, and the Government of New South Wales gives £10,000. Victoria is prepared to contribute also, upon condition that the vessels call at Melbourne, which no doubt they will do in due time. The Imperial Government is in full sympathy with the new undertaking, and is constantly being importuned for assistance by the friends of the new line, and with every prospect of success. It therefore requires no great foresight to see that, with the reduction of fares and freights, which is the inevitable outcome of opposition, coupled with all the other elements that are arrayed against the present American line, it is only a matter of time when it may be compelled to abandon the struggle.

It is well known that the Canadian Pacific people are the prime movers in the establishment of this new line. It is, of course, quite clear what their objects are. They speak out frankly, or at least their agents do, and say that they are bidding for the Pacific passenger traffic—not for a share of it, but for the whole.

This avowal on the part of the Canadian Pacific Railway Company ought to open our eyes to the great danger that threatens our commerce in the Pacific. Should the Australasian trade, including also Samoa, Fiji, and, perhaps, a large or at least a considerable percentage of the Hawaiian trade be diverted to Vancouver, it will mean a serious loss to San Francisco as a commercial center, and also to the many railroads leading from the Pacific coast to the Eastern States.

New Zealand alone of all the colonies is the only one that has always favored the San Francisco route. But even this colony, I regret to say, is now disposed to favor a connection at Fiji with the Vancouver line, which means, of course, that it will discontinue the subsidy of about £13,000 per annum, which it now pays to the San Francisco line. I have of late observed the gradual development of this adverse sentiment against the San Francisco service. The president of the Auckland Chamber of Commerce, in the course of his recent annual address, recommended the establishment of a fast service to connect with the Vancouver route at Fiji, which, in substance, meant the abandonment of the San Francisco line. This recommendation was the outcome of a feeling among the people that they had been contributing for years to the American line without receiving adequate returns. In other words, they paid dearly for the maintenance of the line, while the people of the United States reaped the benefit.

The trade between these colonies and the United States can not be ignored, as it is increasing year by year and is capable of great expansion, if we only make an effort to cultivate their tastes and learn their necessities, and I know of no surer or better way to do this than to establish frequent, satisfactory, and uninterrupted communication.

That the great railway lines and the commercial interests of the Pacific coast generally must sustain a serious loss, should the present mail service be abandoned, admits of no argument. I therefore feel that I am justified in referring at length to this subject, hoping it may serve as a timely warning, and thereby avert the dangers that threaten the existence of the San Francisco-Australian mail service.

OBSTACLES TO TRADE.

I see no obstacles in the way of introducing American flour into New Zealand except in the matter of price. To begin with, there is a duty of $4.86 per ton of 2,000 pounds on flour and the same on wheat. Last year the wholesale price of flour was from $48.65 to $50. Taking the latter figure as a basis, and adding the duty of $4.86 and $7.50 freight from San Francisco by steamer; we have a total of $62.36. From New York, by sailing vessel, the freight would be $15 per ton, which would increase the cost from $62.36 to $69.86. An average passage from New York to New Zealand is about one hundred days, and from San Francisco to Auckland by steamer twenty days.

The price of wheat in Auckland last year was 60 cents per bushel of 60 pounds, while this year it has fallen to 54 cents per bushel.

In view of the above figures, I regret I can not offer any practical suggestions which might help to successfully introduce our flour and enable it to compete with the domestic article. The difficulty increases when the original cost, freight, commission, duty, insurance, etc., are all considered.

JNO. D. CONNOLLY,
Consul.

AUCKLAND, *March 1, 1894.*

VICTORIA.

IMPORTS OF FLOUR AND WHEAT.

The colony of Victoria is, comparatively speaking, a large wheat-growing country, producing wheat and manufacturing flour far in excess of home requirements, which, together with the fact of the existence of such a prohibitive import duty as 70 cents and $1.21 per cental on wheat and flour, respectively, no matter whence imported, shows the impossibility of the importation of

either of the two commodities from the United States and other countries being made with profit.

The imports into the colony of wheat and flour from the United States and other countries during the past four years were:

Year.	Wheat.		Flour.	
	From United States.	From other countries.	From United States.	From other countries.
	Centals.	*Centals.*	*Centals.*	*Centals.*
1890	2	82,093	8	25,138
1891	.....	186,230	.....	31,017
1892	.....	116,835	2	30,497
1893	8	148,013	.....	22,229

The small quantities from the United States were evidently made as trial shipments, and, in all probability, with unsuccessful results. Of the quantities from other countries, almost the whole was from districts in the adjacent colony of New South Wales, in close proximity to the Victorian border.

VICTORIAN EXPORTS OF FLOUR AND WHEAT.

The amounts of wheat and flour exported from the colony to various countries from 1888 to 1892 are given by the Government statist as follows:

Exports of flour from 1888 to 1892.

Whither exported.	1888.	1889.	1890.	1891.	1892.
Australasian colonies:	*Centals.*	*Centals.*	*Centals.*	*Centals.*	*Centals.*
New South Wales	544,375	418,468	583,502	671,240	779,247
Queensland	197,352	91,108	111,264	97,728	114,258
South Australia	.....	.....	111	205	283
Western Australia	1,995	450	886	6,044	20,969
Tasmania	15,852	778	6,779	4,129	17,535
New Zealand	7,114	.....	3,844	40	.....
Fiji	1,081	330	4,594	9,810	9,409
United Kingdom	53,476	5,876	122,209	134,584	15,293
Belgium	.....	.....	.....	560	20
France	520	2,870	834	748	330
Germany	2	.....	.....	.....	.....
India and Ceylon	20	22	1,136	226	130
Straits Settlements	.....	.....	140	400	.....
Hongkong	.....	20	.....	.....	.....
Java	100	140	3,500	2,730	6,920
Mauritius	5,790	1,530	640	2,848	7,254
Cape Colony	.....	.....	.....	.....	5,601
Réunion	9,330	3,980	9,330	9,553	3,962
United States	.....	.....	.....	1,642	.....
South Sea Islands	2	.....	252	253	318
Guam	9,200	1,240	.....	18,117	6,098
Total	846,209	526,822	789,021	960,797	987,442

Exports of wheat from 1888 to 1892.

Whither exported.	1888.	1889.	1890.	1891.	1892.
Australasian colonies:	*Centals.*	*Centals.*	*Centals.*	*Centals.*	*Centals.*
New South Wales	245,390	208,072	49,492	316,075	640,920
Queensland	2,561	94	288	26,178	32,620
South Australia	13,996	7,949	1,204	49,578	325,600
Western Australia	69	5	29	95	27,202
Tasmania	7,526	365	6,801	30,556	22,899
New Zealand	250	.....	.....	.....	.....
Fiji	.....	.....	.....	4	.....
United Kingdom	1,206,438	14,420	295,460	1,488,985	911,571
Belgium	.....	.....	.....	4,947	.....
France	5,540	.....	.....	23,900	1,000
Mauritius	.....	.....	6,555	.....	.....
Cape Colony	.....	.....	.....	.....	17,389
Réunion	.....	.....	1,000	13,440	1,646
Guam	106,403	13,556	.....	893,186	238,518
Total	1,588,173	244,461	360,829	2,846,944	2,219,355

VICTORIAN WHEAT AND FLOUR PRODUCTION.

The following table shows the quantity of wheat grown and flour made in the colony during the five fiscal years 1889–'93:

Year.	Wheat.	Flour.
	Bushels.	*Tons.*
1889	8,647,709	184,056
1890	11,495,720	146,808
1891	12,751,295	209,773
1892	13,679,268	186,935
1893	14,814,645	187,908

As the statistics for the fiscal year 1894 are not yet available, the total yield of wheat must be given approximately, and I am authoritatively informed that it amounts to 14,000,000 bushels, being one of the most bountiful the colony has yet experienced. Of this amount, 6,500,000 bushels will be required for an average population of 1,180,000 and 1,500,000 bushels for seed. The total requirements are, therefore, 8,000,000 bushels, which, being deducted from the total yield, viz, 14,000,000 bushels, leaves 6,000,000 bushels available for export. In addition, a considerable quantity of old wheat is still held, and it may be concluded that the surplus of 1894 available for export will be over 7,000,000 bushels.

OBSTACLES TO TRADE.

The colony manufactures all the flour required for home consumption, which is sold in the local markets for far less than that of the United States could be when freight and duty are added.

The flour made in the colony is made by the roller process, and grades about the same as the best Minnesota.

TRADE OUTLOOK.

Although every facility is afforded as regards transportation, monetary exchange, etc., it is obvious that the prospects of the United States extending her market for wheat flour in this direction are anything but encouraging.

DANIEL W. MARATTA,
Consul-General.

MELBOURNE, *March 1, 1894.*

POLYNESIA.

HAWAIIAN ISLANDS.

STANDARD OF LIVING.

The standard of living among the whites here and the better class of natives is very high.

QUALITY OF FLOUR USED.

There are two grades of flour used here—first and second. About twice the quantity of the first grade is used as compared with the second.

IMPORTS OF FLOUR AND WHEAT.

The quantities of American flour imported during the calendar year 1891 were 251,061 quarter sacks, 2,962 half sacks, 2,500 pounds, and 20 cases; in 1892, 210,188 quarter sacks, 1,992 half sacks, and 40 cases; and during the year 1893, 199,244 quarter sacks, 1,985 half sacks, 45 cases, and 100 barrels.

In 1891 there were imported 879,183 pounds and 342 sacks of whole wheat, and 11,150 pounds and 12 cases of cracked wheat; in 1892, 750,283 pounds and 451 sacks of whole wheat, and 7,400 pounds and 9 cases of cracked wheat; and in 1893, 597,373 pounds and 867 sacks of whole wheat, and 7,100 pounds, 6 cases, and 5 sacks of cracked wheat.

Neither flour nor wheat was imported except from the United States during the periods named.

DUTY AND EXCHANGE.

There is no import duty on American flour or wheat. The import duty on wheat flour and wheat from other countries is 10 per cent.

The facilities for monetary exchange are good.

ELLIS MILLS,
Consul-General.

HONOLULU, *April 30, 1894.*

NEW CALEDONIA.

STANDARD OF LIVING.

The standard of living in New Caledonia is equal to that which prevails in France, and is on the French style.

American flour would find a fair market in this district if it could be bought at the same price as Australian flour.

QUALITY OF FLOUR USED.

The civil population use only the first quality of flour. A household quality is consumed by those in the Government service, viz, the troops, subsidized employés, and prisoners.

IMPORTS OF FLOUR AND WHEAT.

No American flour has ever been imported into this colony. Australian flour has held the market for at least twenty years. No American wheat has ever been imported into the colony.

The quantities of wheat flour imported from the Australian colonies were: In 1891, 3,795 tons, valued at $183,282; in 1892, 4,093 tons, valued at $236,996.

There was no wheat imported in 1891 or 1892.

There are as yet no statistics published for 1893. A flour mill was erected in Nouméa in 1892, and began operating in January, 1893. The quantity of Australian wheat imported by this mill in 1893 was about 5,000 tons.

DUTIES AND PRICES.

The duty on wheat or flour from all countries, including France, is an ad valorem duty of 4 per cent on original invoices and freights. The present price of best prime milling wheat in Australia is 58 cents per bushel, free one board, sacks counted as wheat.

OBSTACLES TO TRADE.

Freight from Victoria and South Australia is $3.12 per ton of 2,240 pounds. The wheat market is weak, and a rise can not be looked for within six months at least, and if it reaches 66 cents a bushel at the end of the year it will be surprising.

South Australia and Victoria have very large surpluses, while New South Wales will require to import only 1,000,000 bushels this year, as against about 2,500,000 bushels in 1893, and will probably be self-supporting next year. New Zealand is a very large exporter. To send American flour or wheat to this market prices must be cut down and very cheap freights secured.

The consumption in New Caledonia does not exceed 500 tons per month. Instead of sending large quantities at one time it would be better to arrange for a passing ship to drop part cargo.

The distance is the great obstacle in the way of the extension of trade between the United States and this colony.

TRADE OUTLOOK.

In the absence of direct communication, it will always be impossible for the importers of this colony to order wheat or flour from the United States, but should offers come from American exporters so that the price of flour or wheat landed here would not be more than the value of the Australian articles I believe the merchants would prefer to buy from the United States.

L. LE MESCAM,

NOUMÉA, *March 15, 1894.* *Vice-Commercial Agent.*

SAMOA.

STANDARD OF LIVING.

The standard of living in this country is above the average, and the people are quite ready to eat American flour.

QUALITY OF FLOUR USED.

The quality of American flour used is "Bakers' Extra."

IMPORTS OF FLOUR AND WHEAT.

The quantities of flour and wheat imported into Samoa were as follows:

Years.	Flour.			Wheat.	
	American.	Other.	Total.	American.	Other.
	Pounds.	*Pounds.*	*Pounds.*	*Sacks.*	*Pounds*
1891	60,500	155,340	215,840	.....	8,160
1892	91,300	159,880	251,180	2	8,640
1893	76,500	75,680	152,180	.....	6,720
Total	228,300	390,900	619,200	2	23,520

DUTIES.

The import duty on wheat and flour from all countries is 2 per cent ad valorem.

EXCHANGE AND SHIPPING FACILITIES.

There are no facilities for American exchange, but one or two mercantile houses issue British exchange.

The facilities for shipping from the United States to this country are good—steamers every four weeks and sailing vessels three or four times a year.

OBSTACLES TO TRADE.

There are no obstacles in the way of the extension of trade in American flour except the difficulty of obtaining exchange.

TRADE OUTLOOK.

The trade in American flour will undoubtedly increase, as it is superior to all other flours.

W. BLACKLOCK,
Vice-Consul-General.

APIA, *April 24, 1894.*

DENMARK.

STANDARD OF LIVING.

Among the laboring classes of Denmark, especially in the rural districts, the standard food is black bread and potatoes. The bread is made from the coarsest and cheapest grades of rye and wheat—mostly rye—and as the peasant workman, as a rule, is very poor this cheap bread is best suited to his means of paying. In the cities and among the upper classes the standard of living is high, wheaten bread of the best quality being generally used in all the hotels, cafés, and restaurants. Private families do not make their own bread, the bakers supplying the demand generally.

QUALITY OF FLOUR USED.

My investigations lead me to believe that all grades of flour are in use here, with the preponderance in favor of the better grades. Spring as well as winter wheat is used; but as the Danish mills produce a flour similar to the American winter-wheat flour, it would seem that spring wheat is best adapted to market purposes here. As I am informed, the American product was first introduced into Denmark in 1890, and the importation has steadily increased.

IMPORTS OF WHEAT AND FLOUR.

In the following table I give the statistics of wheat and flour brought into Denmark during the years 1891 and 1892; the reports for 1893 are not yet available. The Danish fiscal year runs from April 1 to March 31, but in all matters of statistics the calendar year is considered. In this table, therefore, the calendar year is referred to.

Whence imported.	Wheat flour.		Wheat.	
	1891.	1892.	1891.	1892.
	*Pounds.**	*Pounds.**	*Pounds.**	*Pounds.**
Belgium	.....	.....	18,920	989,215
France	.....	4,000	.....	.....
Germany	2,164,983	7,837,760	39,313,395	86,353,625
Great Britain	610,098	1,595,506	865,805	2,614,830
Greenland	.....	174	.....	.....
Holland	.....	245,320	259,075	352,170
Norway	27,260	796	.....	.....
Russia	1,600	89,037	32,054,135	1,718,280
South America	.....	.....	1,605,835	.....
Spain	.....	2,940	.....	.....
Sweden	698,384	1,321,746	14,835	26,445
Turkey in Europe	.....	.....	1,738,275	904,720
United States	3,853,595	5,926,261	48,112,055	61,946,025
All other	.....	.....	.....	215
Total	7,355,920	17,223,540	123,982,330	94,905,515

* Danish pounds; 1 Danish pound=1.102 pounds avoirdupois.

I do not, however, consider these figures absolutely correct in regard to the quantity of wheat and flour imported from the United States. One of the large flour merchants of Copenhagen has admitted to me that a considerable portion of the wheat and flour credited in the reports to England and Germany is in reality of American origin, being transshipped at Hull and Hamburg. This is, in all probability, the explanation of the heavy imports from Germany.

As far as my observations go, there is no prejudice here against American flour, and I think the people are quite as ready to eat it as any other flour, provided, always, the price is kept at a figure which can successfully compete with that of European production.

DUTIES.

There is no duty whatever on wheat or flour imported into Denmark from any country. The question has been mooted in the Rigsdag, notably during the last session, but nothing came of it, and the entry is still duty free.

EXCHANGE AND SHIPPING FACILITIES.

The banks of Copenhagen, prominent among which are the Privat Bank, Den Danske Landmands Bank, and the Handels Bank, are upon a firm and solid financial basis; but it is not unusual for the Danish merchant to open credits for the benefit of the American shipper in London or Hamburg.

The Thingvalla line, with five steamers, runs direct between New York and Copenhagen, and, while I am aware that the English and German lines offer cheaper rates (at least it is so claimed), I think American shippers would find it to their interest, when wheat and flour are intended for this market, to consult the preferences of the Danish merchant and ship by the direct line.

OBSTACLES TO TRADE.

Of the two merchants I consulted on this point one answered that he knew of no obstacle in the way of an increased trade in American wheat. The other was of opinion that the merchants of Copenhagen would prefer their wheat flour shipped direct and not via Liverpool or Hamburg. Of the flour coming thus into Denmark, the bags are often torn and the flour soiled and wasted, thereby causing loss and dissatisfaction to the merchant here. The transshipping line invariably claims that the damage was sustained on board the ocean liner or at least before it received the goods, and the merchant here is without redress.

TRADE OUTLOOK.

It is very difficult to forecast the probable results in the effort to extend the business in American flour. As already noted, it was first introduced into Denmark in 1890, and the importations have steadily increased. From this it looks as if the outlook is good. As will be seen by the foregoing

table, the United States already have the firmest foothold on the wheat market here. As long as the American shipper can compete with prices here, his wheat and flour will be in demand.

ROBERT J. KIRK,
Consul.

COPENHAGEN, *May 24, 1894.*

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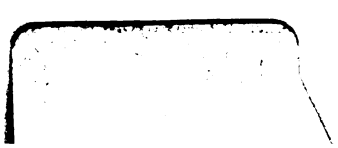
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